



**Office of Quality Assurance and Source
Inspection**

Source Inspection Guidelines for Local Agencies (SIGLA) Manual



**Materials Engineering and Testing Services
Division of Engineering Services**

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1. Introduction and Objectives

1.1 Purpose

The *Source Inspection Guidelines for Local Agencies* (SIGLA) has been prepared to aid California local agencies to create a satisfactory Quality Assurance (QA) Source Inspection program. The term “local agency” used throughout this document means any public entity (federal, state, regional transportation planning agency [RTPA], county, city, or other local government entity) that sponsors or administers a construction contract on the state highway system. In addition, any private entity that sponsors or administers construction contracts on the state highway system, unless otherwise noted, can be considered a local agency.

Local revenues for state highway projects may include local sales tax, other local funds, local federal-aid funds (Surface Transportation Program [STP], Congestion Mitigation Air Quality [CMAQ], Transportation Enhancement Activities [TEA], and other funds), and private funds. Local agencies may combine their local funds with state and federal funds (State Transportation Improvement Program [STIP], Interregional Improvement Program [IIP], State Highway Operation and Protection Program (SHOPP) and Minor Projects to develop transportation improvements.

This guideline document provides information on QA Source Inspection definitions, processes, procedures, roles and responsibilities, and documentation which are required in order to receive federal-aid and/or state funds for many types of local transportation projects.

These guidelines are based on Caltrans’ own QA Source Inspection practices and procedures that were carefully developed to meet federal law. These practices and procedures are outlined in the Office of Quality Assurance and Source Inspection (QASI) Manual. Please contact METS Rep for QASI manual.

1.2 Background

The passage of Senate Bill 45 in 1997 substantially changed the process by which state and federal transportation funds are allocated, placing the majority of responsibility for planning and prioritization of project funding in the hands of local and regional agencies.¹ A result of these changes can be seen in the recent upward trend of projects within the State Highway System (SHS) that are Advertised, Awarded, and Administered (AAA) by external Implementing Agencies.

The California Department of Transportation (Department), as owner/operator of the State Highway System (SHS), has the statutory and inherent obligation to ensure that all modifications or additions to the SHS, regardless of project sponsor or funding source, are:

¹ <https://admin.onramp.dot.ca.gov/deputy-directives>

- Safe, operational, maintainable, compatible and of good value.
- Providing for the efficient multimodal movement of people and goods.
- In the best interest of the general public.
- Developed and constructed in compliance with laws and regulations that govern the use of State and Federal transportation funds.
- Developed and constructed in partnership with vested stakeholders.

Projects on the SHS shall comply with applicable state and federal standards to ensure system-wide consistency with operational, safety, and maintenance needs. The Department may approve exceptions to this requirement that it determines to be appropriate per Government Code 65086.4.

Under Title 23, United States Code, and the Joint Stewardship and Oversight Agreement between FHWA and Caltrans, Caltrans is responsible for the administration of federal-aid (FHWA funded) transportation projects in California and cannot delegate this overall administrative responsibility.

Per the Joint Stewardship Agreement, Caltrans will exercise its FHWA assumed authority by further delegating federal authority to local agencies to the greatest extent possible and for those projects advertised, awarded, and administered by the local agencies on the State Highway System, Caltrans will ensure that state standards and project development procedures are followed. The act of ensuring is also referred to as oversight.

Although Caltrans has the overall administrative responsibility, many project functions such as quality assurance during the construction phase is typically delegated to the local agencies. The legal document that outlines this delegation is called the Cooperative Agreement. This is further outlined in Deputy Directive 23 Revision 2 (DD 23 R2), which states that when external Implementing Agencies administer a project on the SHS, they are responsible for implementing adequate quality assurance procedures to ensure project components comply with Caltrans policies, standards, procedures, and best practices.

1.3 Source Inspection

Title 23 Code of Federal Regulations (CFR) Section 637.205 provided in Appendix 1 requires that each State Transportation Department (STD) develop a quality assurance program. Section 637.207 mandates that the quality assurance program has an acceptance program that includes verification sampling and testing. This testing is to be performed by qualified testing personnel employed by the STD or its designated agent, excluding the contractor and vendor.

Verification sampling and testing of materials manufactured or fabricated away from the jobsite is known as quality assurance source inspection. Section 10 of this document provides detailed information on material sampling and testing from the source.

Source inspection is an integral part of an effective QA Acceptance Program. Verification source inspection helps to ensure that structural materials incorporated into the SHS comply with contract requirements with regard to raw materials, fabrication processes, personnel certifications, and in-process QC testing. The purpose of verification source inspection is to:

- Verify that adequate off-site QC is in place
- Perform verification sampling and testing of representative material
- Perform necessary in-process verification inspections
- Perform Non-Destructive Testing at appropriate times
- Mitigate issues before the material is shipped to the jobsite
- Decrease the potential for project delays that verification sampling at the jobsite may cause

Per Materials Engineering and Testing Services and Geotechnical Services (METS/GS) Directive - 03 provided in Appendix 2, METS does not provide laboratory testing or source inspection services for construction projects (i.e. Design-Bid-Build) administered by external Implementing Agencies on the SHS. For projects that are advertised, awarded, and administered (AAA) by external implementing agencies, source inspection shall be performed by that agency and Caltrans serves in an oversight capacity.

1.3.1 Construction Procedure Directive (CPD) 08-5 (Suspended by MCT 17-1)

Per Caltrans Construction Procedure Directive (CPD) 08-5 (Appendix 3), and Deputy Directives 23-R2 and 90 (Appendix 4), when an agency other than Caltrans is providing verification source inspection, the Implementing Agency is required to prepare a Source Inspection Quality Management Plan (SIQMP). Approval from the state materials engineer is required for each SIQMP, prior to issuance of the encroachment permit for construction.

The SIQMP Outline has been developed to help local agencies manage their source inspection efforts when administering construction projects within the SHS. If the implementing local agency proposes to perform its own source inspection, they are required to prepare a separate SIQMP.

The SIQMP Outline is posted on the METS website and provided in Appendix 5:

https://mets.dot.ca.gov/manuals/SIGLA/#Section_header761

This guideline document is a tool to help the local agency develop a satisfactory SIQMP.

Sample SIQMPs are also posted on the METS website and provided in Appendix 6:

https://mets.dot.ca.gov/manuals/SIGLA/#Section_header762

2. References

- Local Agency resources from FHWA and Caltrans can be found at:
 - [Engineering Services Main Webpage](#)
 - [METS Representatives List](#)
 - [Deputy Directive 23-R2](#)
 - [CEM-6302 Final Materials Certification](#)
 - [CEM-6303 Final Acceptance Checklist for Federal-Aid High Profile Projects](#)
 - [Construction Manual Supplement For Local Agency Resident Engineers](#)
 - [Local Assistance Procedures Manual](#)
 - [Local Agency Structure Representatives Guidelines](#)
 - Quality Assurance and Source Inspection Manual (Please contact METS Rep for QASI Manual.)
 - [Oversight Resident Engineer Guidelines](#)
 - [Structural Materials Testing Laboratory Quality Manual \(April, 2017\)](#)
 - [Federal Highway Administration Federal-aid Program Administration for Local Public Agency](#)
- Other state and federal manuals and documents should be consulted for specific guidance in developing a project. Pertinent documents can be accessed through the Division of Local Assistance Home Page on the Internet at:
 - <http://www.dot.ca.gov/localassistance/index.html>

3. Definitions

Table 3.1 provides the various definitions of key terms in regards to source inspection.

Term	Quality Assurance	Quality Control	Quality Management Assessment	Verification
23CFR637B (1995)	All those planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.	All contractor/vendor operational techniques and activities that are performed or conducted to fulfill the contract requirements.	No definitions- typically referred as Oversight, which is defined as “Oversight is the act of ensuring that the federal-aid highway program is delivered in accordance with applicable laws, regulations and policies.”	Sampling and testing performed to validate the quality of the product.
Deputy Directive 90-R1	The activities performed within the Implementing Agency during the project delivery process that provides confidence that the project team is fulfilling established project requirements and expectations.	The operational processes, practices and activities performed at the project team level during the project delivery process to ensure that the product meets the project’s purpose and need and fulfills established quality requirements.	The activities performed by the Department at a project level to ensure that the Implementing Agency’s quality assurance activities result in projects being developed in accordance with Department standards, policies and practices and the Quality Control plan provided by the Project Sponsor.	No definitions

Table 3.1: Definitions of Key Terms in regards source inspection

Table 3.2 is the glossary of commonly used abbreviations in the SIGLA manual.

Abbreviation	Definition
AAA	Advertise, Award, and Administer
AML	Authorized Materials List
CCO	Contract Change Order
CFR	Code of Federal Regulations
COC	Certification of Compliance
CPD	Construction Procedure Directive
IA	Implementing Agency
QMA	Quality Management Assessment
METS	Materials Engineering and Testing Services
MR	Local Agency Materials Representative
NCR	Non-Conformance Report
OQASI	Office of Quality Assurance and Source Inspection
OMR	Oversight METS Representative
QA	Quality Assurance
QAP	Quality Assurance Program
QC	Quality Control
QCP	Quality Control Plans
RE	Resident Engineer (Local Agency Construction Team)
RFI	Request for Information
SHS	State Highway System
SIGLA	Source Inspection Guidelines for Local Agencies
SIQMP	Source Inspection Quality Management Plan
SR	Structure Representative (Local Agency Construction Team)

Table 3.2: Glossary of Common Abbreviations

4. Risk Management

The QA Acceptance Program includes an assessment of all materials based on importance. The appropriate level of source inspection is conducted based on this assessment. Materials with a higher consequence of failure such as main members and non-redundant members require source inspection 100% of the time while materials with less risk require less frequent inspection.

Level of importance may depend on:

- Consequence of failure (safety concerns)
- Monetary risk of failure
- Complexity of fabrication
- Specialty materials
- History of the material
- High maintenance cost

In order to manage the materials and source inspection for the project, the local agency's quality assurance program should maintain a source inspection priority list. The list should include all main material components (bid items) as well as significant sub-components for the project. The list should be categorized based on the level of importance for their project which then corresponds to a source inspection priority.

Examples of materials with a higher source inspection priority that require source inspection 100% of the time are:

- Structural steel bridge girders
- Precast concrete bridge girders
- Steel overhead sign structures

Less critical materials that may only require periodic source inspection are as follows:

- Masonry blocks
- Precast utility structures
- Aggregate base materials

4.1 Risk Assessment

Project Risk Management (PRM) is a process of planning for identifying, analyzing, communicating, managing, and responding to project risks through all phases of project delivery (see Figure 4.1). Risk management is a scalable approach that provides a level of effort that is appropriate to a particular project depending on its size and its complexity.



Figure 4.1 Risk Assessment Cycle

4.2 Project Material Risk Assessment Matrix

When developing the SIQMP, the Risk Assessment Matrix serves as a model to capture Project Risk Management related to source inspection. The Risk Assessment Matrix (see Figure 4.2) assists in performing a qualitative risk analysis in terms of probability and impact. When the form “Notice of Materials to be Used” is received and the Local Agency Material Representative (MR) is required to determine resources for source inspection, the MR can utilize the Risk Assessment Matrix to reevaluate previously determined high risk items requiring source inspection, and adjust resources as deemed necessary. The duties and responsibilities of the MR are described in Section 5.1. Any updates to source inspection activities require an update to the SIQMP, which shall be submitted to Caltrans for review and approval. Refer to Section 6.2 for information regarding any deviations in performing source inspection for the structural material listed therein.

Risk = Probability x Impact

Probability indicates the chance of a material failing to meet the specification while impact indicates the consequences on a project if the material fails to meet this specification. Materials that rate for high in both categories (high risk of failing to meet specification and high risk of consequences if they do fail) should have the highest level of scrutiny by MRs. The Risk Assessment Matrix assists in decision making for allocation of resources by answering the following questions:

- What risks affect achieving project objectives?
- Which are most important?
- How do they affect cost and schedule?
- What can be done?
- How did the response affect change?

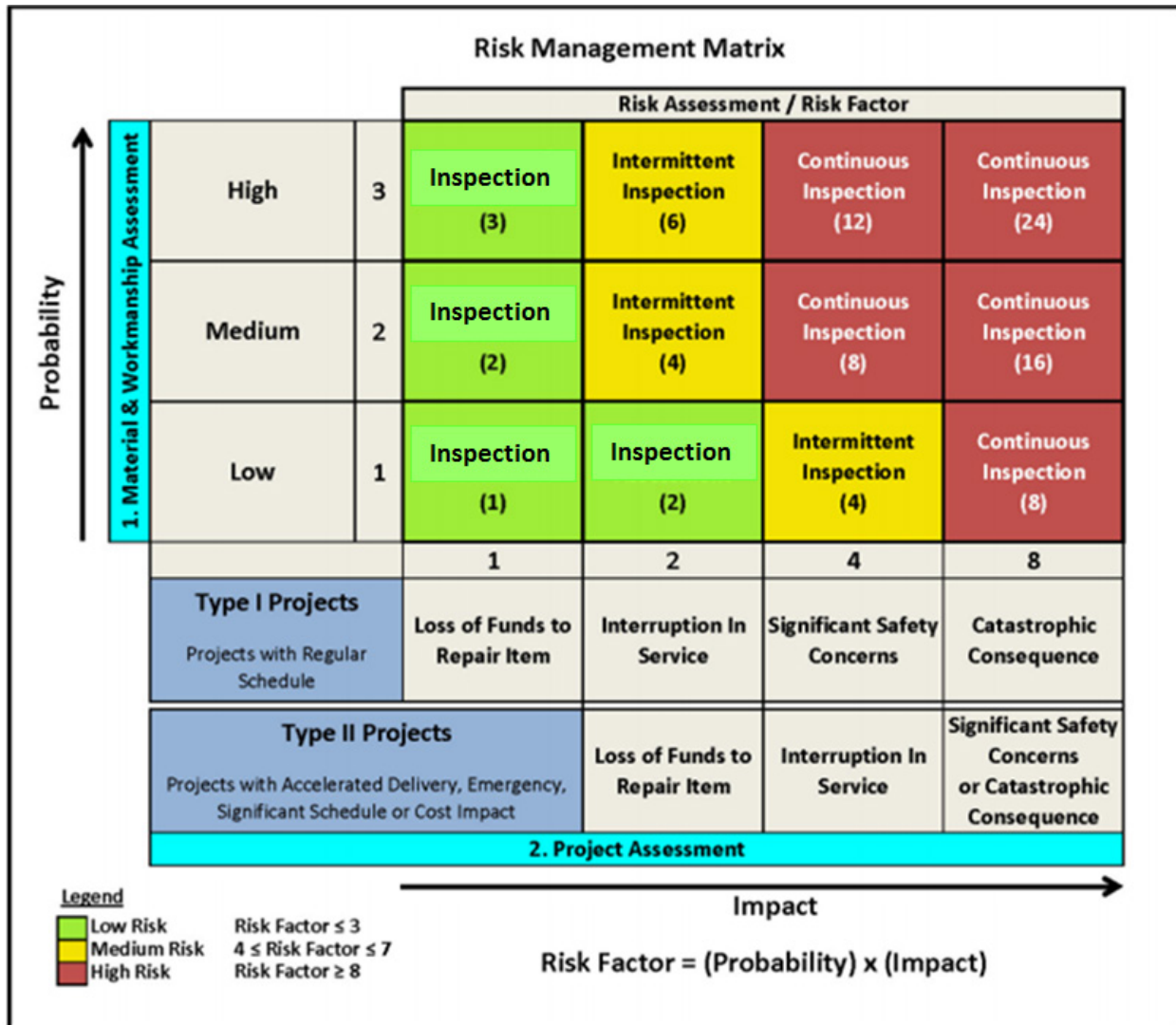


Figure 4.2 Risk Assessment Matrix

4.2.1 Probability: Measure of Material Failing to Meet Specification

Material and Workmanship Assessment: A fabricator’s standard of workmanship can directly affect the quality of the material fabricated. Because of such, in order to assess a product’s likelihood of not meeting specification, it is necessary for the MR to have thorough knowledge of the fabricator’s history. Factors influencing a fabricators history include:

- Past Performance Fabricating Item
 - Quality Management
 - Functionality of a facility’s QC personnel or procedures
 - Material Quality
- Facility Experience

- Audits

The assessment made by the Engineer should account for a facility's ability to demonstrate adequate processes and resources to produce quality products. There are several components an Engineer needs to review in order to evaluate a facility's workmanship history. The first step is evaluating the previous experience of working with that facility to gauge the frequency of past issues, types of issues, and likelihood of the issues' recurrence.

Past performance can also be checked, items such as quality management issues, nonconformance involving the material being evaluated, and frequency of material production should all be evaluated. It is important to note that the number of issues or non-conformance reports (NCRs) at a fabricator may not accurately represent fabricators workmanship as a better representation is dependent on the volume of work has been done in the past. It is also important to account for the applicability of issues by assessing the issue details, the origin of the issue, and quality management involvement in resolving the issue.

From this assessment the MR is to categorize a facilities workmanship on the Risk Assessment Matrix for that material as low, medium, or high probability of not meeting specification and obtain the corresponding Probability Value (1-3), see Figure 4.3.

1. Material & Workmanship Assessment	High	3
	Medium	2
	Low	1

Figure 4.3 Probability Assessments (Y-Axis of Risk Assessment Matrix)

4.2.2 Impact: Consequences of Material Failing to Meet Specification

Project Assessment: Every project has risks, regardless of project size or complexity. Risks have negative or positive effects on at least one project objective (cost, time, scope, and quality). Two components used to perform a project assessment include: (1) evaluation of project type, and (2) evaluation of project impact due to material failure.

- Project Type:** Types of projects that MR is typically involved with are:
- Type I:** Projects with regular schedule
 - Type II:** Projects with accelerated delivery, emergency projects, or projects with significant schedule or cost impacts

Consequence of Failure: The second part of performing project assessments includes categorizing each product or material based on its highest consequence of failure. The highest consequence of failure is determined by the likely type of project impact a material failure would cause. Four types of project impacts are as follows:

- **Catastrophic Impact:** Failure likely to cause loss of life or injury (e.g. strength properties, prestressing strand)
- **Safety Impact:** Failure creates a safety hazard for employees or the public (e.g. reflectivity, pavement markers)
- **Interruption of Service:** Failure or repair may cause an interruption in service (e.g. compaction, asphalt concrete)
- **Monetary Impact:** Failure results in monetary loss only (e.g. galvanizing, steel irrigation pipe)

None of the project impacts are mutually exclusive and in turn, each progressive impact may include the consequences of lower impact; catastrophic impact being the highest concern and monetary impact being the lowest concern.

Once the project type and material consequence of failure are determined, the Engineer obtains the corresponding Impact Value (1-8), see Figure 4.4.

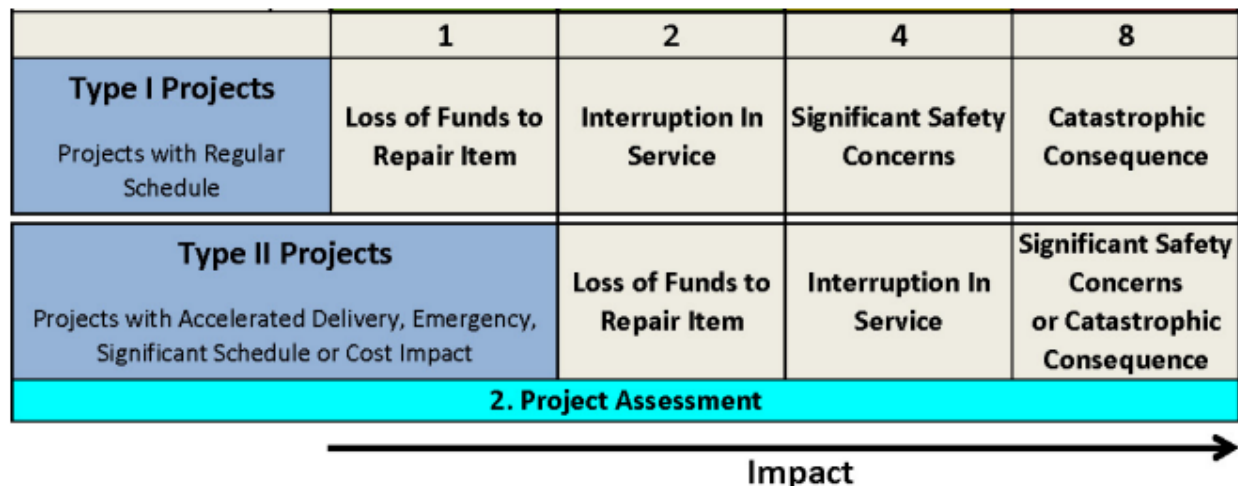


Figure 4.4 Impact Assessments (X-Axis of Risk Assessment Matrix)

Resultant Risk Assessment: Probability x Impact

The ultimate goal of the Risk Assessment Matrix is to assess risks associated with material fabrication and accordingly use optimum resources for source inspection. The Engineer is to determine a resultant Risk Factor (RF) as a product of Probability and Impact Values obtained from the respective assessments:

$$\text{Risk Factor (RF)} = \text{Probability Value} \times \text{Impact Value}$$

Once the Risk Factor is determined, an appropriate level of source inspection is recommended using the Risk Assessment Matrix:

Risk Level	Risk Assessment	Resultant Risk Factor (RF)	Recommended Action
Low Risk	Inspection at Jobsite	$RF \leq 3$	No inspection at the source. Materials inspection performed at the jobsite.
Medium Risk	Intermittent Source Inspection	$4 \leq RF \leq 7$	Perform intermittent QA in-process inspection at the source for fabrication. (e.g. anchor bolts, hoops, signal and lighting poles)
High Risk	Continuous Source Inspection	$RF \geq 8$	Perform continuous QA in-process inspection at the source for all fabrication activities (e.g. precast girders).

Table 4.1 Risk levels

It is important to note that the evaluation of the resultant Risk Factor for a material can change throughout the life of the project as workmanship and project assessment are capable of shifting. At which point, the MR is to re-evaluate and accordingly manage available resources.

5. Duties and Responsibilities of Key Personnel

5.1 Local Agency Materials Representative

The Local Agency Materials Representative (MR) is a Transportation Engineer, Registered California Civil Engineer (PE).

Based on the project size and resource availability, the role of the MR may be performed in conjunction with the Implementing Agency's Construction Team such as the Structure Representative (SR) and/or Resident Engineer (RE) roles and responsibilities.

The MR serves as the single point of contact between Fabricators and the RE/SR. The primary responsibilities of the MR include:

- Providing input on the development (when possible) of the Source Inspection Quality Management Plan (SIQMP), which will be the guiding document for management of materials that are fabricated or produced outside of the jobsite
- Coordinating revisions to the SIQMP
- Performing Quality Control Plan (QCP) reviews
- Performing Shop Drawing reviews
- Performing Submittal reviews
- Peer reviewing Inspection Reports
- Serving as Implementing Agency point of contact on materials issues
- Participating in pre-fabrication meetings, pre-construction meeting, and pre-fabrication audits
- Meeting regularly with the RE/SR to establish and maintain open lines of communication throughout the life of the contract
- Providing clear, effective and timely structural materials recommendations to the RE/SR
- Anticipating and resolving any issues associated with quality assurance and source inspection while maintaining standards, consistency, contract schedule and contract cost
- Performing a Risk Assessment (RA) on all materials to determine if material requires source inspection
- Verifying fabrication facilities or materials are evaluated or pre-qualified for the project
- Performing fabrication facility audits, if deemed necessary
- Documenting when engineering judgment is used on an MR Report or Material Suitability Documentation Report, Blue Tag. All MR reports must be signed or co-signed by a registered engineer
- Verifying that all issues and non-conformances are resolved before material is tagged and shipped to the jobsite
- Providing clear, effective and timely structural materials recommendations to clients

5.2 Quality Assurance Inspectors

Inspection personnel perform technical assignments to either the field or the office. However, most inspectors are assigned to field duty (facility visits/source inspections). Field duties include performing inspections and documenting the results in the required reports. Inspectors must be an employee of the Implementing Agency or must be hired by an Implementing Agency subcontractor providing only QA services. The Inspector must not be employed or compensated by the Contractor or any of their subcontractors. Inspectors assigned to the office are typically at the Associate Inspector Level.

The responsibilities of the Inspector include at a minimum:

- Verifying required documentation is provided, such as Certificate Of Compliance (COC), Mill Certs, Test Results, etc. at the time of inspection and release of product
- Verifying Buy America requirements are met
- Performing in-process inspections, verify QC processes and procedures are followed as outlined in QCP
- Writing inspection reports
- Issuing non-conformances on products or QC processes
- Assisting MR in QCP reviews
- Assisting MR in Shop Drawing reviews
- Assisting MR in Submittal reviews

Types of reports generated by Implementing Agency Inspectors include:

- Quality Assurance Nonconformance Report
- Report of Inspection of Materials
- Notice of Shipment of Material
- Material Suitability Documentation Report
- Material Suitability Report
- Welding Inspection Report
- Welding Witness Report
- Concrete Inspection Report
- Source Inspection Report
- Paint Inspection Report

Type of release tags used for releasing fabricated materials by Implementing Agency Inspectors:

- Orange Tags:
 - Inspected material conforms to contract documents
 - Material no longer requires source inspection
 - Responsibility for material is transferred to the RE
- Green Tags:
 - Material transferred from one vendor to another vendor

- MR/Inspector still responsible for inspection
- Should not arrive at the jobsite
- Blue Tags:
 - Material that does not fully conform to contract document
 - Engineering analysis that determines material is suitable for intended purpose
 - Requires concurrence from the design team, the RE, and MR

Implementing Agency Inspectors shall meet the minimum certifications per Standard Specification and *SIQMP Outline*:

- Steel
 - Certified Welding Inspector (CWI)
- Non-Destructive Steel Inspector
 - Certified ASNT TC1A Level II (UT, MT, PT, LT, etc.)
 - Level III technicians who hold a current ASNT Level III certificate in that discipline and are certified to perform the work of Level II technicians
- Precast Concrete
 - Registered as a civil engineer in the State of California (P.E.) or
 - Precast/Prestressed Concrete Inspector (PCI) Level II inspector
- Coating
 - An inspector with extensive structural coatings experience.

6. General Inspection Instructions

6.1 General

The Implementing Agency's Source Inspection staff (MR staff) is responsible for inspection, sampling and testing of structural materials and products for compliance with contract requirements to be used during construction.

In order to avoid impacting a project's construction schedule, the MR staff is required to understand internal procedures as outlined in this section, in order to streamline the material inspection and release processes.

6.2 Quality Assurance of Structural Materials Bid Items

The agency implementing the construction contract (Implementing Agency) on the State Highway System (SHS) is responsible for acceptance of the materials and workmanship, and it cannot be assigned to the contractor or to a consultant working for the contractor, regardless of the project delivery method.

One of the largest factors in transportation planning is the need to ensure that all systems, regardless of size or scope, are safe and efficient for the traveling public. The California Department of Transportation takes these responsibilities seriously, as evident by its goals to provide the safest transportation system for workers and users, and to effectively deliver quality projects, products and services. METS Office of Quality Assurance and Source Inspection- has developed a list of items to provide practices, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System. At a minimum, the Implementing Agency shall perform source inspection of the following material prior to release to the jobsite:

- Precast prestressed concrete girder
- Precast prestressed concrete deck unit (slab type)
- Precast prestressed concrete slab
- Prestressing strand
- Precast jointed concrete pavement
- Individual precast slab replacement
- Precast concrete box culverts
- Structural steel (bridge)
- Structural steel
- Painted structural steel
- PTFE spherical bearings
- Column casing
- Sign Structure

- Headed bar reinforcement
- Furnish steel piling (Class N)
- Ground anchors and soil nails
- Miscellaneous metal (restrainer - cable type)
- Reinforced concrete pipe (60" or greater)
- Structural steel for building work
- Mechanically Stabilized Earth (MSE) panels
- Anchor bolt assemblies
- Resistant-butt-welded hoops
- Electrical components
- Epoxy coated reinforcing bar

Items which require further inspection and testing at the jobsite by the Implementing Agency include:

- Field welding
- Mechanically coupled reinforcement bar

If the Implementing Agency decides to deviate and not perform source inspection on any of the items listed above, a risk assessment analysis is required to be provided and approved by Caltrans prior to fabrication. A form provided in Appendix 7 is required to be filled out and submitted to METS for review and approval. After Caltrans METS responds with the affirmative to the agency's request for deviation, the Implementing Agency can move forward with implementing the change.

6.3 Materials Meeting

At the beginning of every job, the MR is to coordinate a materials meeting with the Implementing Agency's designated RE and SR. It is beneficial to invite the Contractor to the meeting as the information discussed can help streamline processes and keep all parties aligned.

The MR is expected to be knowledgeable in the fabrication and source inspection processes, and explain how these activities will meet the requirements of the SIQMP and project documents. The MR discusses material requirements unique to the contract, potential source inspection issues, and the reporting and distribution system. The MR emphasizes the need for timely submission of "XX-3101 Notice of Materials to be Used". When discussing the reporting system, the MR clearly explains the purpose of non-conformance reports (NCRs) and the importance of timely, properly documented resolutions.

The MR discusses the procedures to support the RE/SR, including a general approach to how MR receives contract documents such as: addenda, design drawings, shop drawings, quality control

plans, submittals, Requests for Information (RFI), and any other contract correspondence which affects source inspection or clarifies contract requirements. The MR also explains materials release procedures and NCR notification procedures and protocol.

At the materials meeting, the MR:

- Discusses any materials concerns the RE and SR may have
- Provides a list of materials requiring a “XX-3101 Notice of Materials to be Used”
- If applicable, discusses with RE and SR that pre-weld and/or pre-precast meetings shall be held. Actual scheduling of the meetings can be finalized at a later point once Contractor is contacted and the fabricator is known
- Determines a general approach to inform MR of contract addendums, change orders, pertinent contract correspondence, and shop drawings
- Determines if the pre-construction meeting with the Contractor has occurred and requests to be included
- Provides a list of material-related submittals that must be received and reviewed by MR
- Discusses appropriate construction meetings in which the MR’s participation would benefit the contract

6.4 Buy America

“Buy America” applies to all federal-aid contracts. “Buy America” requirements also apply to all contracts within the scope of a National Environmental Policy Act (NEPA) determination, regardless of whether the contract uses federal funding.

In order for a manufactured product to be considered subject to “Buy America”, the product must be manufactured predominantly of steel or iron and meet the following criteria:

- Product permanently incorporated in the project.

Above requirement applies to steel or iron delivered to the job site for installation and where any precast concrete products are manufactured.

Under this law, steel and iron materials must be melted and manufactured in the United States except:

- Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials
- If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or \$2,500, materials produced outside the United States may be used if authorized.

All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

For steel and iron materials to be incorporated into the work, certificates of compliance (COC) and certified mill test reports shall be furnished. Mill test reports must indicate where the steel and iron were melted and manufactured and this information is verified by Quality Assurance inspector.

Below are examples of Buy America compliance that steel mills can put on their Mill Test Reports:

- “All melting and manufacturing processes for the product occurred in US”
- “100% melted and manufactured in the USA”

The minimum allowance for the use of small quantities of foreign steel may be approved by the RE. The Inspector does not have the authority to make such an approval.

When foreign steel is released, note on the Report of Inspection the items that are foreign steel with an additional note that this has been approved by the RE. The Implementing Agency Inspector may be the only owner’s representative to verify conformance to “Buy America” requirements and deputy directive (DD)-119 requirements. Therefore, this verification is mandatory.

6.5 Quality Assurance Non-Conformances

Non-conformance reports (NCRs) are an integral component of inspection process. The purpose of the NCR is to document material or workmanship that does not meet the contract requirements, or breakdowns in the QC process. They are utilized to communicate to the Implementing Agency’s Resident Engineer when MR staff discovers non-compliances with contract specifications. When situations arise that do not meet all applicable contract requirements, the inspector/MR initiates the non-conformance process using the “Quality Assurance – Non-Conformance Report”. The complete process is outlined in Section 11 of this manual.

6.6 Substituted Materials

When specific brand or trade names are used to designate required products, the Brand or Trade Names and Substitutions contractor may furnish other products that are of equal or better quality. A product is not necessarily equivalent merely because it is on an approved products list. These lists indicate that the products meet the general qualifications. However, some of the listed products may not meet the specific needs of the project or may not be appropriate for a particular location due to factors such as climate conditions or maintenance difficulties.

For substituted materials, Request for Information (RFI) or Contract Change Order (CCO) is required to be accepted for the job. Any deviation from special provisions must have approval from the RE.

MR needs to investigate and determine whether material substitution is suitable to be used on the project. Such materials might require further testing in addition to specification requirements to be considered suitable for use for the application intended. Document when engineering judgment is used on an MR Report or Material Suitability Documentation Report, Blue Tag.

6.7 Certification of Compliance

Section 6-2.03C “Certificate of Compliance” of the Standard Specifications, specifies the requirements and uses of Certificates of Compliance (COC). The approved quality control plan required for some products may additionally require that a Certificate of Compliance be supplied.

When the “Buy America Act” applies (see SIGLA Manual Section 6.4 “Buy America” & Construction Manual Section 3-604 “Buy America Requirements”) to steel products, the manufacturer must supply a COC stating that all melting and manufacturing processes used to produce the material have been performed in the U.S.A.

This certification must also satisfy any additional requirements of the contract’s special provisions. An authorized representative of the producer, typically the quality control manager, must sign the COC.

The Implementing Agency Resident Engineer (RE) can accept certain materials without sampling and testing, if accompanied by a Certificate of Compliance (COC), acceptable only from those sources that have prior records of proven reliability and established quality control.

The RE may also reject the material even with a COC if quality assurance testing has resulted in failing tests or the supplier has failed to perform satisfactory quality control practices. Standard Specifications identify materials requiring a Certificate of Compliance. Typical items include:

- Portland cement
- Elastomeric bearing pads (plain and steel-reinforced)
- Reinforcing bars
- Chemical adhesives for structures
- Concrete admixtures
- Concrete curing compound
- Chain link fencing and railing
- Anchorage devices
- Cable-type restrainers

Refer to Section 6-203C of the Construction Manual “Materials Accepted on the Basis of a Certificate of Compliance” for a list of items accepted at the jobsite on the basis of a COC.

It should also be noted that when a material is on the Authorized Material List (AML), it does not waive COC requirements specified in contract documents.

6.8 Buy Clean California Act

The Buy Clean California Act (BCCA) ([Public Contract Code Sections 3500-3505](#)) is part of California’s overall strategy to address climate change. The BCCA applies to any public works project that is subject to the State Contract Act, which includes projects under Caltrans jurisdiction on the State Highway System. The BCCA requires facility specific EPDs reflecting Global Warming Potential (GWP) values within the limits set forth by the Department of General Services (DGS) for specified structural steel, concrete reinforcing steel, flat glass, and mineral wool board insulation.

Local Agencies shall enforce the following GWP limits on projects where contractually required:

Eligible Material	Subcategory	GWP Limit
Structural Steel	Hot-rolled sections	1.01 MT CO2 eq./MT
	Hollow structural sections	1.71 MT CO2 eq./MT
	Plate	1.49 MT CO2 eq./MT
Concrete Reinforcing Steel	N/A	0.89 MT CO2 eq./MT
Flat Glass	N/A	1.43 MT CO2 eq./MT
Mineral Wool Board Insulation	Light-density	3.33 kg CO2 eq./1 m ²
	Heavy-density	8.16 kg CO2 eq./1 m ²

Source: DGS, BCCA <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-Division-Resources-List-Folder/Buy-Clean-California-Act>

Caltrans has developed [Section 6-1.06](#) of the contract documentation, with some of the criteria shown below. Applicable materials that do not have valid EPDs may not be installed.

Material	Material Specifications	Quantity criteria	Project criteria
Carbon Steel Rebar	Section 52-1.02B, "Bar Reinforcement" Excludes epoxy-coated or galvanized reinforcement	For each mill providing ≥ 20,000 lbs	Total bid over \$1 million and 175 or more original working days
Structural Steel (hot-rolled, plate or hollow)	Section 55-1.02D(1), "General," – Structural Steel and Other Materials tables and Section 99, "Building Construction."	For each mill providing ≥ 5,000 lbs	
Flat Glass	Section 99, "Building Construction"	For each manufacturer providing ≥ 2,000 ft ²	

Material	Material Specifications	Quantity criteria	Project criteria
Mineral Wool Board Insulation	Section 99, "Building Construction"	For each manufacturer providing $\geq 4,000$ ft ²	

The local agency should address the following in their SIQMP:

- Document the applicability of BCCA on their project.
- When BCCA is applicable, acknowledge that no materials will be installed without valid EPDs.
- List what bid items will likely require EPDs based on quantities and threshold requirements.
- In the monthly report, summarize the status of the EPDs received and still pending.

Below are a list of additional resources related to BCCA guidance and implementation:

- Caltrans EPD page:
<https://dot.ca.gov/programs/engineering-services/environmental-product-declarations>
- Caltrans EPD AML for rebar:
<https://mets.dot.ca.gov/aml/EnvironmentalProductDeclarations.php>
- Caltrans Construction Procedure Directive:
[CPD 22-4 Buy Clean California Act - Update](#)
- Caltrans Construction Manual:
[3-606 Buy Clean California Act](#)

7. Source Inspection Process Flowcharts

Figure 7.1 provides the general Caltrans oversight process with Local Agencies.

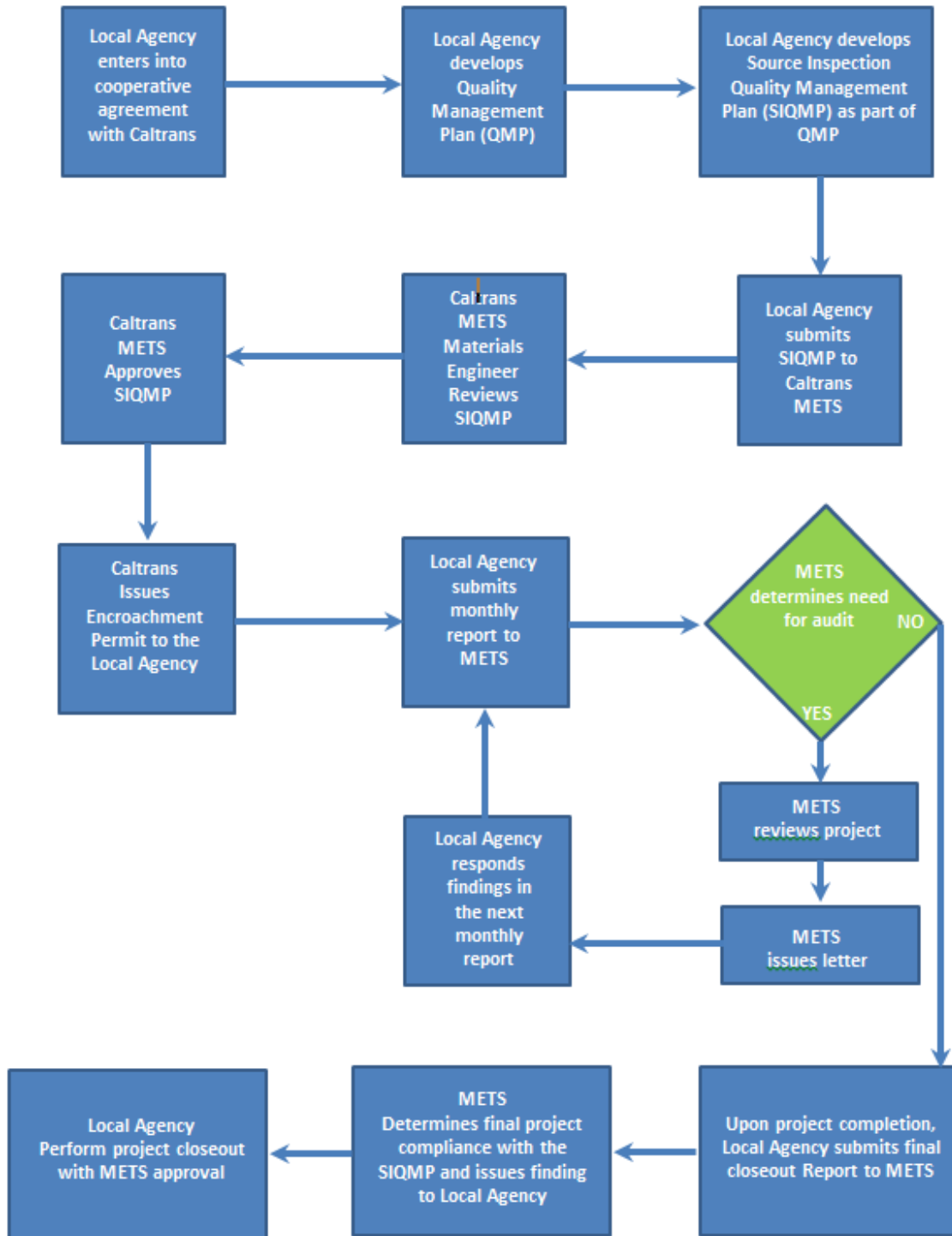


Figure 7.1 Caltrans Oversight Process with Local Agencies

Figure 7.2 provides the general Caltrans - METS Source Inspection process as an example.

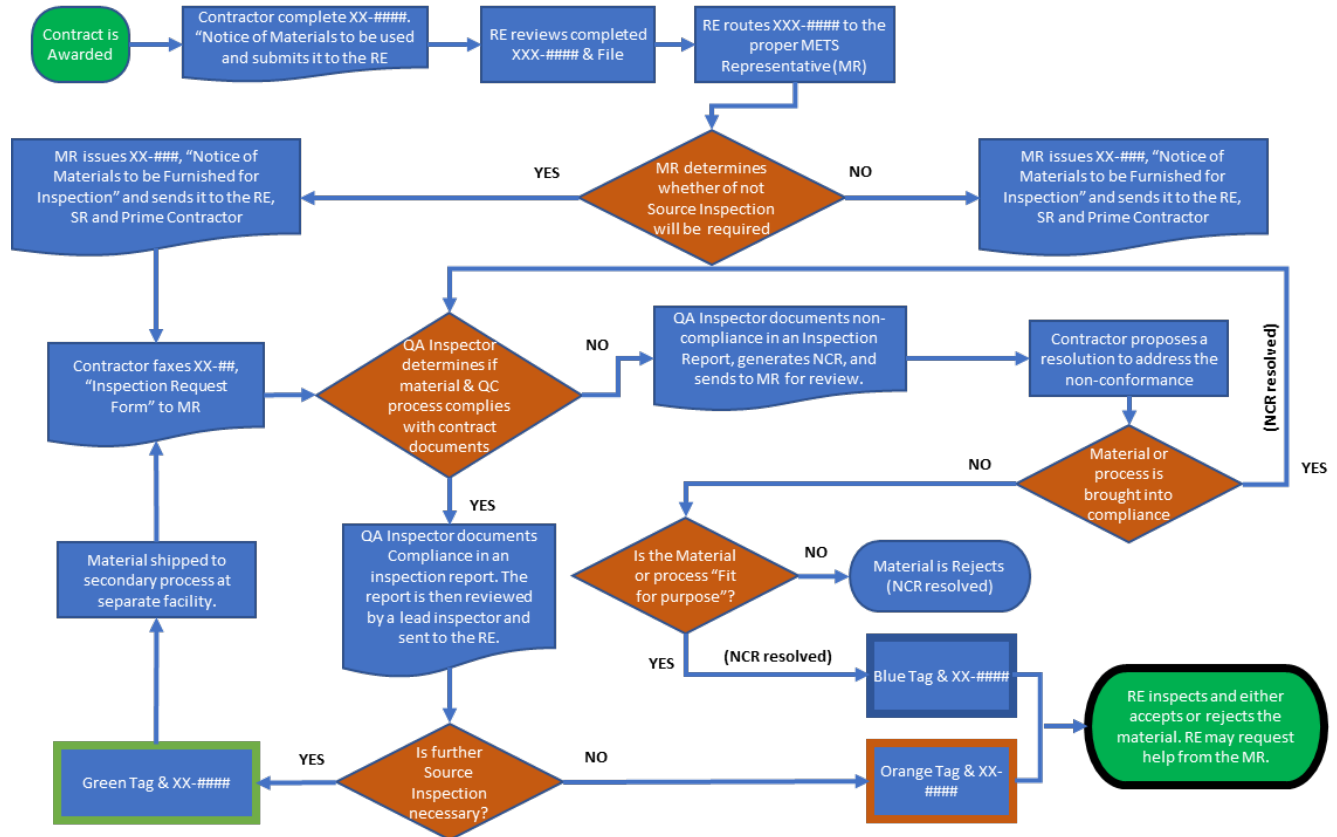


Figure 7.2 Source Inspection Process

Figure 7.3 provides the Source Inspection Process Deviation Protocol.

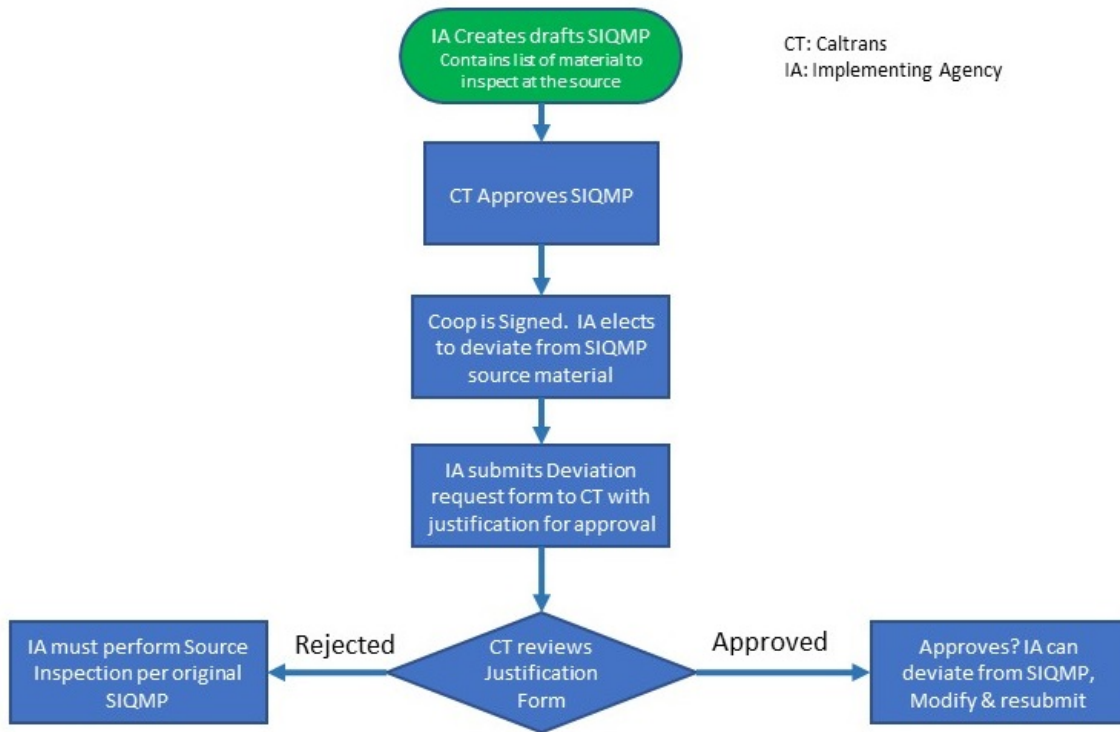


Figure 7.3 Source Inspection Process Deviation Protocol

8. Control of Documents

It is the responsibility of the Implementing Agency to develop a system for Control of Documents and Records. The purpose of the Document and Record Control System is to ensure only the most recent revisions of controlled documents and records are available to appropriate personnel, and revisions are timely and have received all required approvals. Additionally, archiving and retrieval of documents and records have to be included in this system.

8.1 Scope

Establish a document and record control systems that identifies, stores, and manages documents and records related to implementation, maintenance of Source Inspection Quality Management Plan (SIQMP). Specially:

- All documents and records are reviewed and approved by designated personnel prior to issue for use
- Document changes are approved by designated personnel and reasons for change are documented
- A master list of all documents, indicating current authorized versions, is maintained
- Pertinent current issues of documents are available at all locations where operations essential to the effective functioning of the quality system are performed
- Changes and the current revision status of the documents are identified
- Invalid and/or obsolete documents are promptly removed to prevent the unintended use and to apply suitable identification if they are retained for any purpose
- Documents are legible and are readily identifiable
- Any obsolete documents retained for legal or knowledge/preservation purposes are suitably identified
- Documents of external origin necessary for planning and operation of the Local Agency are identified and their distribution controlled
- Quality documents and records are identified, archived, and retrieved in a defined and acceptable manner

9. Example Forms

The Implementing Agency is responsible for developing a Quality Assurance Program (QAP) to assure that the materials and workmanship incorporated into each construction project are in conformance with the requirements of the approved plans and specifications, including approved changes. The program must meet the Title 23, Code of Federal Regulations, Part 637 (23 CFR 637) requirements. Part of this program necessitates the implementing agency to develop standard forms to be used during source inspection activities. Caltrans has developed an extensive library of standard forms to meet this requirement. An implementing agency may derive their forms from our standard library and alter them as seen fit. For ease of communication across agencies, the local agency is required to keep the Caltrans form number, but alter the prefix, header, footer, and any references to Caltrans, METS, OQASI, etc. For example, Caltrans has developed a notice of materials to be used for, "CEM-3101". The local agency needs to use the same form number "3101" but replace "CEM" with an acronym of their choosing. Examples of widely used OQASI Forms are located in the Appendix 8.

10. Material Sampling and Testing

10.1 Tagging and Sampling Procedures

In some cases, material is required to be sampled and tested prior to tagging and releasing. A Sample Identification card, or XX-101, is the form used for a sample that is being sent to the testing facility that the Implementing Agency has previously designated. The XX-101 is used to document material information for the testing lab to ensure traceability of the material being sampled. The implementing Agency should ensure there is a process in place for the testing facility to notify the Agency when test results are complete. The Implementing Agency should ensure that test results are logged and made easily available. Figure 10.1 provides the tagging and sampling procedure as an example.

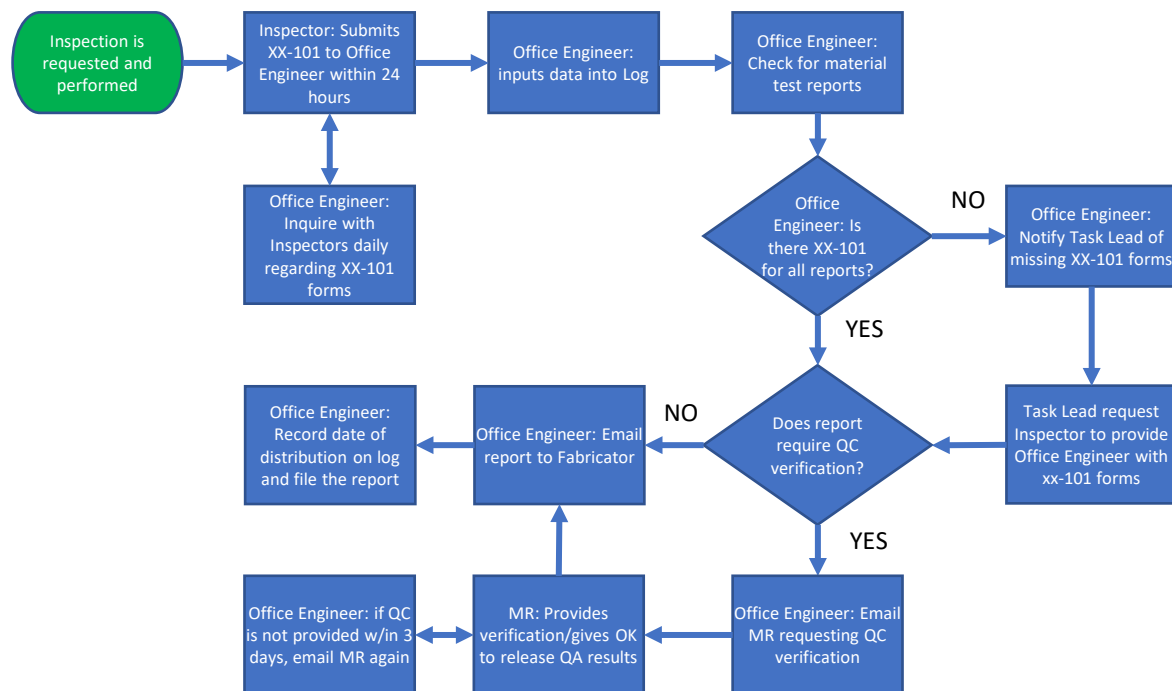


Figure 10.1 Tagging and Sampling Procedure

10.1.1 Proper Sampling

Verify that the SIQMP sampling procedures and numbers comply with the project’s special provisions for information about specialized items that require a particular type or number of samples.

- Correct number of samples for required testing – The number of samples are based on project specifications, Caltrans Standard Specifications, ASTM, AASHTO, and ANSI requirements. Verify that QC results meet the specification requirements -

Manufacturer's QC data must show compliance with specifications. They must be legible and understandable. The testing data must support the included Certificate of Compliance.

- Size and type of sample - Some materials require specific lengths and configurations. Steel plate or bar size maybe controlled. Sample may have to come from within the component. For example: See Standard Specification Section 51-1.12H(2) Steel Reinforced Elastomeric bearing pads 2" or thicker.
- Sampling must be performed by the RE or a designee on his behalf. Sampling cannot be performed by any Quality Control function including but not limited to fabricators and contractors.

Please see Appendix 9 for table of material sampling frequencies and testing requirements. This table is not all inclusive but is meant as general guidance to some items requiring sampling and testing.

10.1.2 Documentation Guidelines

10.1.2.1 Sample Identification Card

A Sample Identification Card, form XX-101 must accompany samples for QA testing at the designated testing facility. Documenting the right information on the XX-101 form, obtaining and verifying the relevant backup documentation makes the testing process much more efficient. These forms can be filled out manually or electronically. Samples must be properly identified so the testing facility can function efficiently and report the results in a timely manner to the project.

- Materials test reports - Final product test results should be in readable format. Should include which tests were done to which specifications.
- Mill test reports – Parent (source) materials analysis and physical test results from the metal foundry must be included with many products. These suppliers must meet ASTM specification requirements and should comply with Buy America requirements (see SIGLA Section 6.4)
- Tracking numbers from supplier - Product must be identified by some combination of the following: lot #, heat #, load #, or release #. All must be traceable back to the parent material mill test reports and certificates of compliance.
- Project information - Contract information is a must; Resident Engineer, Structures Representative, expense authorization (E.A.) or project number, the name of the person who took samples or witnessed the sampling process.
- Because each specification year may have different requirements, verify the applicable specification year (example: Caltrans 2018).
- Identify the material on the form by its specification name rather than by its trade name completely fill out Sample Identification cards.

Sample traceability – To have proper traceability all documents must match and the reference numbers must be carried over from one document to another. Without traceability the samples should not be tested. Detailed instructions for filling out Sample Identification Cards as well as a completed form are located in Appendix 10.

10.1.3 Handling of Samples

Packages containing samples may be damaged on their way to the testing facility. This damage may separate documentation from the sample or obscure the sample identification if it is not marked and secured properly. To ensure proper identification of samples the following requirements must be met:

- Packaging - Wire tie or strapped together, box or bag, shrink wrapped or taped.
- Proper & secure identification - XX-101 should be with sample. Painted on identification or wired on tags. Clear tape over printed labels.
- Protection from weather - Identification labels and XX-101's must be protected from moisture and damage.
- Coating protection - Coated samples should be encased in some protecting medium such as foam pipe insulation for epoxy coated rebar.
- Timely shipping or delivery is essential – Do not hold the samples for a group shipment. Ensure that samples are shipped within a few days.

10.2 Testing

10.2.1 Laboratory Requirements

A verification sampling and testing program must be established by the implementing agency. In order to avoid an appearance of a conflict of interest, any qualified private laboratory shall perform only one of the following types of testing on the same project: Verification testing, QC testing, or dispute resolution testing. Each project specific SIQMP, with respect to the laboratory, must describe the following:

- Verification of lab qualifications for the applicable materials on this project (e.g. ISO 17025 for steel, and AASHTO Accreditation Program (AAP) for concrete).
- Provide a list of verification tests to be performed by the implementing agency along with the frequency and applicable industry standards to be used/specified (ASTM, CTM, etc.). A template for the list is provided in Appendix 11.
- Describe the verification materials testing filing system and the physical location it may be reviewed during audits.
- Test results for material samples must be documented.
- Provide example forms that will be used for sampling material and reporting test results.

- Provide a statement that there are no conflicts of interest regarding the verification lab and any other acceptance activities for the project.

11. Nonconforming Materials

11.1 Quality Assurance Non-Conformances

Non-conformance reports (NCRs) are an integral component of the Quality Assurance (QA) inspection process. The purpose of the NCR is to document material or workmanship that does not meet the contract requirements, or breakdowns in the Quality Control (QC) process. They are utilized to communicate to the designated Resident Engineer (RE) when QA personnel discover non-compliances. When situations arise that do not meet all applicable contract requirements, QA personnel initiate the nonconformance process using the Form XX-15, "Quality Assurance - Nonconformance Report".

The RE has the responsibility to make the final decision regarding the incorporation of the material into the project.

Example situations requiring an NCR:

1. QA Inspector identifies material/workmanship that does not meet contract requirements, and the deficiency is not corrected within that work shift.
2. The third occurrence of the same deficiency regardless of the contractor's ability to correct the problem within a work shift. The NCR would detail the QC's inability to address root causes of the issue.
3. Any systemic nonconformance regardless of the contractor's ability to correct the problem within a work shift.
4. Any action taken by QC that is not in conformance with the contract requirements or any attempts to hide nonconforming processes or products.
5. Material is shipped without proper inspection and release documentation.

Example situations NOT requiring an NCR:

1. Material that has not yet been inspected or accepted by the contractor's QC personnel.
2. First or second occurrence of a deficiency if QC personnel acknowledge the problem and ensure that it will be corrected within that work shift.
3. Nonconformance that has been identified by QC and will be repaired during production unless it is a systemic nonconformance or a third occurrence of the same deficiency as mentioned above.

If any clarification is needed regarding issuance of an NCR the MR will discuss the issue with the appropriate personnel in the Implementing Agency's chain of communication. The Oversight METS Representative (OMR) may also be contacted for guidance. Once determined that an NCR should be written, the MR is responsible for notifying the RE as soon as practically possible, preferably in person or by phone.

Procedure to issue an NCR:

1. After QA locates a problem or deficiency, QC and/or a responsible representative from the contractor needs to be promptly informed of the finding. QA inspectors will identify to the contractor areas of nonconformance; however, written NCRs will not be provided to the contractor or quality control personnel.
 - a. The QA inspector should **NOT** stop the work under any circumstances unless specifically authorized by Resident Engineer.
2. The inspector contacts the MR to discuss the issue as to whether an NCR is required.
3. MR gives verbal notification to the Resident Engineer (RE) or Structures Representative (SR) as soon as practically possible.
4. Inspector drafts the NCR including any relevant conversations with contractor or QC personnel in the report. The QA inspector then submits the draft NCR to the MR for review.
5. The MR reviews the NCR for accuracy and transmits the NCR to the RE and/or SR within 24 hours of the determination that a nonconformance report needs to be written.
6. A copy of the NCR is transmitted to the OMR for informational purposes only.
7. An illustration of both the verbal notification and written notification process of NCRs are shown in the Figures 11.1 and 11.2.

Initial Verbal Notification of NCRs

Process should be complete as soon as practically possible.

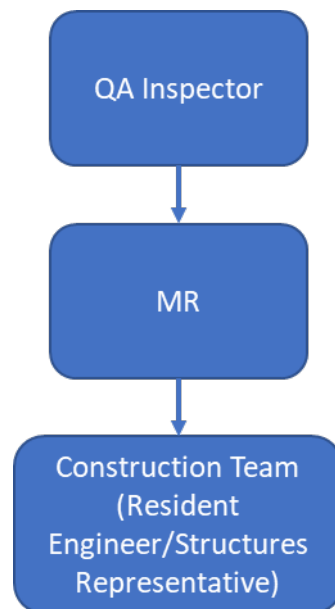


Figure 11.1 Flowchart for verbal notification of NCRs.

Written Notification of NCRs (XX-15)

Process should be complete within 1 Working Day of NCR.

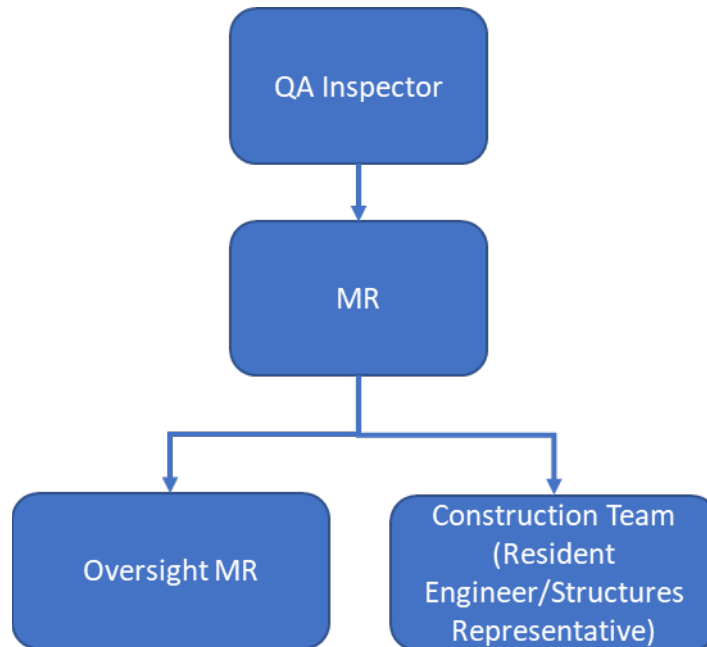


Figure 11.2 Flowchart for written notification of NCRs.

An inspector or MR will complete a XX-16, “Quality Assurance Nonconformance Resolution”, when the proposed resolution is submitted by the Contractor and MR, RE and SR are in agreement with the proposed resolution. The MR will track the number of outstanding NCRs and work with the Resident Engineers and Structure Reps to reach a resolution. MRs are responsible for acquiring signed correspondence from the RE or SR. If the MR and RE or SR reached a resolution during a telephone conversation, the MR will attempt to get a response in an e-mail documenting the conversation.

11.2 Material Suitability Release

11.2.1 Determination of Suitability

Material suitability release procedures may be developed as a mechanism to keep projects moving forward, better document material suitability decisions, and to ensure proactive resolution of material issues. The Inspector is not authorized to release material if it does not conform to the specifications, contract plans, and approved working drawings without proper authorization. However, the material suitability release procedures allow QA staff to release material if an engineering analysis has determined the material will be suitable for its intended

purpose. The purpose of this section is to provide guidelines for procedures to execute this system.

The Material Suitability Release Procedures Process

The alternative release procedures shown in Figure 11.3 will allow inspectors to release material when the MR has determined that it is suitable for its intended purpose in the project. This material suitability process may be initiated by one of the following:

- A Nonconformance Report (NCR)
- Contractor Requests Information (RFI)
- Meeting, Submittal, MR Observation, Other

After one of these instances occurs, the Inspector and MR should discuss the issue and come to consensus whether a nonconformance or change to the contract has occurred.

Once consensus is reached between the Inspector and MR, the MR will contact the Resident Engineer (RE) and/or Structure Representative (SR) in order to notify them of the deviation to the contract. Additionally, the MR will inform the Contractor of the issue in order to initiate discussions and develop possible resolutions. During this time, it will be important for the MR to sufficiently research the issue in order to facilitate the best materials engineering technical recommendation. The MR will also prepare a memorandum to the Implementing Agency's Construction Team in order to aid in issuing official correspondence notifying the Contractor of the issue and request a proposal to resolve the issue. Once the Contractor has responded to the official correspondence, the MR should proceed with one of the following courses of action:

1. Acceptance Proposal from the Contractor

If the Contractor proposes a resolution that the MR, Construction Team and Designer can agree to, the MR will document the issues and decisions on the appropriate forms (9) and forward to appropriate personnel in the chain of communication for review. Upon approval, the MR will verbally notify the Contractor of the Implementing Agency's approval of the resolution.

2. Unacceptable Proposals from the Contractor

If the Contractor proposes a resolution that the MR, Construction Team and Designer do not agree with, the MR will record the issue and resolution on the appropriate forms (see Section 9) and will verbally notify the Contractor of the Implementing Agency's rejection of the resolution.

3. Proposals from the Contractor Without Project Team Consensus

During the course of a project there may be instances where the Construction Team or Design Team does not agree with the technical recommendation issued by the MR. If the MR, RE/SR, and the Design Team cannot gain consensus on how to best move forward

with the material, the project team will escalate the issue to the appropriate personnel in the chain of communication who will be the final decision making authority for materials and fabrication issues on the project.

4. Materials Brought Back into Conformance

If the Contractor proposes a solution that will bring the material back into conformance with the Contract, the MR will record the resolution on the appropriate forms and may authorize release under form XX-29 (Appendix 8).

Projects with material released to the jobsite under the material suitability release process may require Contract Change Orders (CCOs). The MR may assist with review of CCO language for technical accuracy before it is forwarded to the Contractor.

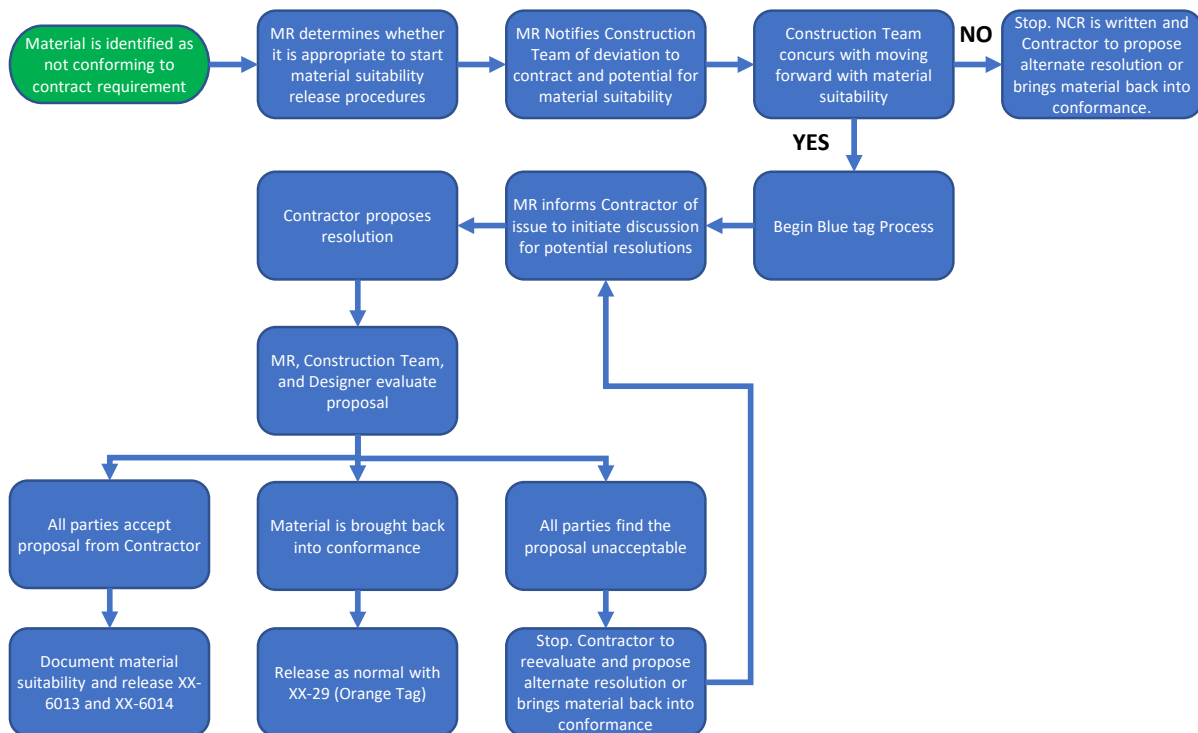


Figure 11.3 Alternative Release Procedures - Material Suitability Process

11.2.2 Documentation of material suitability and release

Sample XX-6013 – “Material Suitability Documentation Report”

The MR will complete the XX-6013 in order to provide a summary of the issue and documentation of the decisions made by the MR, the Construction Team, and Design. One XX-6013 should be completed for each issue that can potentially result in a material suitability release. The XX-6013 should be treated as a working document that is updated daily and summarizes all of the ongoing

discussions and decisions regarding a material issue. The MR will be ultimately responsible for completing and updating this report as the resolution of the issue changes and decisions are made by the appropriate parties. A blank copy of the XX-6013 is located in Appendix 8.

Sample XX-6014 – “Material Suitability Report”

For nonconforming material that has been found fit for its intended purpose, the Inspector will complete the XX-6014 to replace the XX-29 or modify the XX-6011 that would typically be completed for conforming material. See Appendix 8 for blank XX-6014 Material Suitability Report form.

The following guidelines shall be followed when determining the type of Blue Tag for material release:

- Material shall be released with a XX-6014 if the material has been evaluated and determined to be suitable for its intended purpose and it or its parent material no longer requires in-process inspection.
- Material shall be released using a Green Tag Report (XX-###) with a note describing the material suitability issue if the material is evaluated and deemed suitable for its intended purpose and is being shipped from one vendor to another vendor where the Local Agency is still responsible for inspection (i.e. strand or rebar going to a pre-cast yard). This is important as another inspector will need to be aware of the material’s deficiency with the contract specifications. Note: A modified Green Tag Report (XX-###) may have a note on the tag identifying the material as having been evaluated for suitability, or some other modification, such as a sticker.

12. Quality Control Plans

This section discusses Quality Control Plans (QCP) that are required for material that will be source inspected and therefore the review, approval, and implementation must be addressed in the Local Agency's SIQMP. QCPs for items not requiring source inspection will still require review and approval by the RE (i.e. HMA QCP when applicable), but are not part of the scope of this document or the SIQMP.

12.1 General

A QCP details the methods the contractor will use to ensure the quality of the work. QCPs must meet or exceed the material, testing and inspection requirements specified in the project contract documents. The project contract documents will specify if a pre-job meeting is required to discuss a quality control plan. Local Agencies are required to discuss all QCP that are applicable to their project in their SIQMP as discussed in Section 2.4 of the SIQMP Outline.

12.2 Typical Quality Control Plans

Below are some of the typical QCPs that are most likely to be required per the project contract documents. The Local Agency is responsible for identifying all QCPs required by the project contract documents in their SIQMP.

12.2.1 Splice Prequalification Quality Control Plan (SPQCP)

12.2.1.1 SPQCP for Mechanical Couplers and Resistance-Butt-Welded Splices (Hoops)

Mechanical couplers are a method used to splice rebar together. Resistance-butt-welded splices are commonly referred to as hoops because the rebar is formed in a circle and then machine resistance-butt-welds the ends together forming the shape of a hoop. The type and model of mechanical couplers and the fabricators of hoops are both required to be on the Authorized Material List. See Section 14 of this manual for more information on Authorized Material Lists. The fact that the couplers and hoop manufacturers are on the Authorized Material List does not exempt them from submitting a SPQCP.

Per Section 52-6.01C(4) of the 2018 Standard Specifications, a splice prequalification report is required to be submitted and approved before production can begin on hoops or couplers.

Per Section 52-6.01C(6)(b) of the 2018 Standard Specifications, welder and welding procedure qualifications are required to be submitted as an informational submittal for hoops.

Per Section 52-6.01C(6)(c) of the 2018 Standard Specifications, a splice prequalification report is required to be submitted and approved before production can begin on couplers.

Note that hoops are exempted in the 2018 Standard Specifications from requiring a Welding

Quality Control plan described below.

12.2.1.2 SPQCP for Headed Bar Reinforcement

Per Section 52-5.01C(1) of the 2010 and 2015 Standard Specifications, “If any part of the head is fabricated in the field, submit a prequalification report as specified for service splices and ultimate butt splices under section 52-6.01C(4).”

12.2.2 Precast Concrete Quality Control Plan (PCQCP)

Section 90-4 of the 2010 Revised Standard Specifications and Section 90-4 of the 2015 Standard Specifications provides minimum requirements for inspection and testing of precast concrete members. Section 90-4 also stipulates different “Tiers” of precast items. Precast members listed as Tier 1 or Tier 2 require a PCQCP and have more stringent QC requirements than Tier 3 or Tier 4 precast members. The PCQCP must be job specific and comply with all contract requirements.

12.2.3 Welding Quality Control Plan (WQCP)

Section 11-3 of the 2010 Standard Specification and Section 11-2 of the 2015 Standard Specification specifies when a WQCP is required. Note that Section 52-5 and 52-6 of the 2010 and 2015 Standard Specifications exempts hoops and headed bars from requiring a Welding Quality Control Plan.

Caltrans has developed the requirements for the contents, format, and organization required for a WQCP and can be referenced here:

<https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/mets/wqcp-requirements-a11y.pdf>

A Local Agency can adopt these requirements. Any modifications to these requirements should be clearly identified in the SIQMP.

12.2.4 Non-Project Specific Welding Quality Control Plans

OQASI has preapproved some WQCPs at audited facilities that are valid as long as the facility is on the audited facility list and are only valid for shop welding (not valid for field welding). If a facility is on an OQASI audited facilities list, then their shop WQCP is not required to be submitted on a project by project basis. The facility is still required to submit shop drawings and any other submittal required in the contract documents before they begin fabrication. See Section 14 for more information about the Audited Facility List.

The Local Agency may choose to adopt the OQASI audited facilities list and the preapproved WQCP or may develop its own audited facilities list and approve WQCPs on a job specific basis.

During source inspection, QA inspectors must ensure that fabrication complies with all contract

requirements including the facility WQCP. The following types of facilities on the OQASI audited facility list have shop approved WQCPs that are not required to be submitted and approved before they begin fabrication:

- Welded Steel for Overhead Sign Structures
- Welded Steel for Signal and Lighting Pole Structures
- Steel Pipe Piling

12.2.5 Other Quality Control Plans

Less frequent QCPs may be required in the contract documents. The Local Agency is responsible for identifying all QCPs in their SIQMP.

12.3 Review Guidance

All QCPs must be submitted through the prime contractor to the RE. The RE may forward the QCP to the MR for comments as needed. An appropriate review form shown in Appendix 8 of this manual is required for each submittal. All review forms must be kept in an appropriate filing location and in general compliance with Caltrans Construction filing requirements. The Local Agency is responsible for generating a detailed procedure for the review process of QCPs. See Section 2.4 of the SIQMP Outline for more details.

13. Shop Drawings

Shop drawings are required for material as specified in the contract documents. Local Agencies are required to include a list of all materials requiring shop drawings for their project as well as a documented review process in the SIQMP outline.

13.1 Review Guidance

All shop drawings must be submitted through the prime contractor to the Implementing Agency's designated Resident Engineer (RE). The RE may forward the shop drawings to the MR for comments as needed. An appropriate review form as mentioned in Section 9 of this manual is required for each submittal. An example shop drawing review form is provided in Appendix 8. All review forms must be kept in an appropriate filing location and in general compliance with Caltrans Construction filing requirements. The Local Agency is responsible for generating a detailed procedure for the review process of shop drawings.

14. Authorized Materials Lists and Audited Facilities Lists

METS has developed and is responsible for developing and maintaining multiple approved products lists and audited facility lists. There are many references in the Standard Specifications that require material or facilities to be on these lists.

The METS Authorized Material List can be found at the following location:

<https://dot.ca.gov/programs/engineering-services/authorized-materials-lists>

The METS Audited Facility list can be found at the following location:

<https://mets.dot.ca.gov/afl/AuditedFacilitiesList.php>

If a Local Agency requires Caltrans Standard Specifications to be part of the project documents, they have two options described in Sections 14.1 and 14.2 to meet its requirements.

14.1 Adopting METS Authorized Materials Lists and Audited Facilities Lists

The Local Agency can adopt all or some of the Authorized Materials Lists and Audited Facilities Lists developed and maintained by METS. The Local Agency assumes all responsibility for material coming from these facilities. Just because material is on the Authorized Materials List or is fabricated at an Audited Facility does not guarantee that it will comply with the project contract documents, nor does it exempt the Local Agency from performing the level of QA inspection and testing required to ensure a quality product. Also note that for Caltrans implemented projects, additional QA processes are employed at these facilities in order to accept source inspected materials.

14.2 Develop Local Agency Authorized Materials Lists and Audited Facilities Lists

The Local Agency can develop some or all of its own Authorized Materials Lists and Audited Facilities Lists. These lists can be project specific or developed and maintained for all projects within the jurisdiction of the Local Agency. Any list (even if only one product is on the list) must be submitted along with all applicable test data, reports, and documentation to Caltrans METS for approval before it can be referenced in the project's SIQMP. Contact the OQASI for additional information.

15. Source Inspection Quality Management Plan

When the Local Agency enters into a cooperative agreement with Caltrans, the Local Agency is required to submit a Source Inspection Quality Management Program (SIQMP) to the State Materials Engineer via the Oversight METS Representative (OMR), for review and approval. Approval of the SIQMP is required prior to Caltrans' issuance of the project's encroachment permit.

The responsible OMRs for each district can be found at:

<https://mets.dot.ca.gov/metsrepresentatives.php>

Local Agencies are required to develop an SIQMP in accordance with the direction outlined in Appendix 5. They are also required to use the same paragraph numbering system and must include all sections listed in the outline. The Local Agency can reference sample SIQMPs in Appendix 6.

The respective OMR is available at the onset of every local agency project to answer any questions on putting together the SIQMP document.

15.1 Revisions vs. Addendums/Amendments

Prior to receiving approval to the SIQMP, submit any corrections based on METS' review comments as "Revisions." A revision to the SIQMP is a submittal which contains the entirety of the contents required as defined by the SIQMP Outline. Once the SIQMP has been approved for use on the project, submit only the updates (lab certifications, personnel certifications, additional processes/procedures, etc.) as addendums or amendments.

15.2 METS' Review Timeframe

Provide METS a minimum of 10 working days for a review.

When METS provides comments back to the Local Agency to address, the Local Agency will receive a letter and a review form indicating which portions of the SIQMP require corrections.

15.3 SIQMP Noncompliance Letter

If METS and the Local Agency cannot come to an understanding within the allotted timeframe, the OMR will issue an SIQMP noncompliance Letter. This letter will list a summary of the review findings and any deficiencies with the submittal.

15.4 Appeals Process

In the event a Local Agency and the OMR cannot come to an understanding regarding the effectiveness of the Local Agency's quality assurance procedures, the Local Agency can request reconsideration of the OMR's position by the Federal Acceptance, Review, and Evaluation (FARE)

consisting of the Chief of the Office of Quality Assurance and Source Inspection, the Chief of the Office of Central Laboratories, and the Area Construction Manager. Requests for consideration shall be submitted in writing to the FARE panel with a complete description of how the Local Agency's quality assurance procedures ensure project components comply with Caltrans policies, standards, procedures, and best practices.

Requests should be marked to the addition of the FARE panel and sent to the following address:

Material Administrator Mail Station #5
Materials Engineering & Testing Services
5900 Folsom Blvd, Sacramento, CA 95819
Fax: (916) 227-7084
materialsadministratormets@dot.ca.gov

The FARE panel will review and respond to requests within 10 working days.

15.5 METS' Approval

Once the Local Agency's SIQMP adequately addresses the project's source inspection needs, METS will issue a SIQMP Approval Letter to the Local Agency. A sample approval letter is attached in Appendix 12.

15.6 Monthly Summary Reports

Once the project begins, (identified by the pre-construction meeting) the Local Agency is required to submit a monthly report to the OMR summarizing materials acceptance activities performed during that period. These reports are required regardless of whether any materials or source inspection related activities were performed by the MR. If no activities were performed, a simple report will indicate that. Once MR / Materials related activities are performed, the report will include all of the required information as listed in the SIQMP Outline Section 3.1 in Appendix 5.

16. Local Agency Audits

The intent of the Quality Management Assessment (QMA) audit is for METS to confirm that the Local Agency being audited is fulfilling commitments set forth in the approved SIQMP and contract documents. In general, the audit evaluates the Local Agency's personnel, processes, and the overall effectiveness of their QA acceptance program for materials. The audit is not an inspection of a product or the acceptance of any material. As part of the cooperative agreement, Caltrans provides QMA to assure that materials acceptance work is performed by the Local Agency in compliance with the approved project plans, specifications, SIQMP and in accordance with Caltrans standards. To conduct this work, the OMR is afforded access to all project work including source inspection activities and files. Although passing an audit does not guarantee that the Local Agency is in full compliance with its approved SIQMP, it documents that proper procedures are in place and there is a reasonable expectation that material quality adheres to the requirements of the contract documents.

16.1 Frequency

Audits typically occur once per quarter, however can increase or decrease in frequency should the OMR deem necessary.

Factors to consider determining the frequency of the audits include:

- SIQMP implementation
- Local Agency's past performance
- Complexity and pace of the source inspection work
- Review of Monthly Summary Reports
- Findings from a previous audit
- Overall level of cooperation and proactive stewardship

16.2 Documentation Auditing Activities

The audit will consist of an introductory meeting, review of QA verification procedures, interview of Local Agency's project staff and a de-briefing meeting.

The review of the QA verification procedures includes:

- Nonconformance reports
- Inspection reports
- Material test reports
- Buy America verification
- Submittal review process
- Contractor submitted Quality Control Plans

Key project staff includes:

- Material Representatives

- Inspection and testing staff
- Resident Engineer
- Structures Representative

16.3 Field Audits

The MR should maintain close communication about scheduling for major fabrication items. METS will occasionally perform random audits at the facilities to verify that the Local Agency's personnel are appropriately identified in the SIQMP, certified, qualified, and knowledgeable to perform the inspection.

16.4 Audit Report & Communication

The OMR will compile the final notes and prepare a report with findings and a list of any concerns. The report will number each finding such that the resolutions of these findings are easily tracked throughout the project. The Local Agency is expected to respond to the QMA audit report within ten working days.

Sample QMA Audit Cover Letter can be found in Appendix 13.

Sample QMA Audit Report can be found in Appendix 14.

16.5 Closeout

As part of the closeout review, the OMR will check the Monthly Summary Reports as well as any unresolved audit findings. If there are any outstanding audit findings, the Local Agency will work to resolve these findings before submitting a final acceptance letter. The Local Agency Resident Engineer is required, by the Section 3.2, "Final Acceptance Letter" of the SIQMP Outline in Appendix 5, to provide a stamped letter for the final materials acceptance and certification stating that the approved SIQMP procedures were followed during the life of the project. The OMR will verify that this letter is on file.

If during the closeout review, the project was found to be in substantial compliance with the approved SIQMP and the project has no outstanding issues related to source inspection, then a "Closeout Action Letter" stating that the project is in compliance will be issued.

Unresolved findings that remain or are found during the time of the closeout review may result in the need for a letter to be issued. When it cannot be confirmed that work was performed in accordance with the approved SIQMP or there are outstanding issues on the project, the Closeout Action Letter will not be issued. Depending on the findings, appropriate stakeholders will be notified.

17. List of Appendices

1. Title 23 Code of Federal Regulations (CFR) Section 637.205
2. METS/GS Directive-03
3. Deputy Directive 90 (DD-90-R1)
4. The SIQMP Outline
5. Sample SIQMP
6. Risk Assessment Form deviating from high-risk item
7. OQASI Forms
8. Material List Requiring Source Inspection
9. Sample Identification Card
10. Material List Applicable Standards
11. SIQMP Approval Letter
12. QMA Audit Cover Letter
13. QMA Audit Report
- 14. NDT Requirement Reference**

17.1 Appendix 1: Title 23 Code of Federal Regulations (CFR) Section 637.205 (2021)

Federal Highway Administration, DOT

§ 637.205

§ 636.514 How may I provide notifications and debriefings?

You may provide pre-award or post-award notifications in accordance with State approved procedures. If an offeror requests a debriefing, you may provide pre-award or post-award debriefings in accordance with State approved procedures.

PART 637—CONSTRUCTION INSPECTION AND APPROVAL**Subpart A [Reserved]****Subpart B—Quality Assurance Procedures for Construction**

Sec.

637.201 Purpose.

637.203 Definitions.

637.205 Policy.

637.207 Quality assurance program.

637.209 Laboratory and sampling and testing personnel qualifications.

APPENDIX A TO SUBPART B OF PART 637—
GUIDE LETTER OF CERTIFICATION BY
STATE ENGINEER

AUTHORITY: Sec. 1307, Pub. L. 105-178, 112 Stat. 107; 23 U.S.C. 109, 114, and 315; 49 CFR 1.48(b).

SOURCE: 60 FR 33717, June 29, 1995, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 637 appear at 67 FR 75934, Dec. 10, 2002.

Subpart A [Reserved]**Subpart B—Quality Assurance Procedures for Construction****§ 637.201 Purpose.**

To prescribe policies, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System.

§ 637.203 Definitions.

Acceptance program. All factors that comprise the State transportation department's (STD) determination of the quality of the product as specified in the contract requirements. These factors include verification sampling, testing, and inspection and may include results of quality control sampling and testing.

Independent assurance program. Activities that are an unbiased and independent evaluation of all the sampling and testing procedures used in the acceptance program. Test procedures used in the acceptance program which are performed in the STD's central laboratory would not be covered by an independent assurance program.

Proficiency samples. Homogeneous samples that are distributed and tested by two or more laboratories. The test results are compared to assure that the laboratories are obtaining the same results.

Qualified laboratories. Laboratories that are capable as defined by appropriate programs established by each STD. As a minimum, the qualification program shall include provisions for checking test equipment and the laboratory shall keep records of calibration checks.

Qualified sampling and testing personnel. Personnel who are capable as defined by appropriate programs established by each STD.

Quality assurance. All those planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

Quality control. All contractor/vendor operational techniques and activities that are performed or conducted to fulfill the contract requirements.

Random sample. A sample drawn from a lot in which each increment in the lot has an equal probability of being chosen.

Vendor. A supplier of project-produced material that is not the contractor.

Verification sampling and testing. Sampling and testing performed to validate the quality of the product.

§ 637.205 Policy.

(a) *Quality assurance program.* Each STD shall develop a quality assurance program which will assure that the materials and workmanship incorporated into each Federal-aid highway construction project on the NHS are in conformity with the requirements of the approved plans and specifications, including approved changes. The program must meet the criteria in § 637.207 and be approved by the FHWA.

§ 637.207

(b) *STD capabilities.* The STD shall maintain an adequate, qualified staff to administer its quality assurance program. The State shall also maintain a central laboratory. The State's central laboratory shall meet the requirements in § 637.209(a)(2).

(c) *Independent assurance program.* Independent assurance samples and tests or other procedures shall be performed by qualified sampling and testing personnel employed by the STD or its designated agent.

(d) *Verification sampling and testing.* The verification sampling and testing are to be performed by qualified testing personnel employed by the STD or its designated agent, excluding the contractor and vendor.

(e) *Random samples.* All samples used for quality control and verification sampling and testing shall be random samples.

§ 637.207 Quality assurance program.

(a) Each STD's quality assurance program shall provide for an acceptance program and an independent assurance (IA) program consisting of the following:

(1) Acceptance program.

(i) Each STD's acceptance program shall consist of the following:

(A) Frequency guide schedules for verification sampling and testing which will give general guidance to personnel responsible for the program and allow adaptation to specific project conditions and needs.

(B) Identification of the specific location in the construction or production operation at which verification sampling and testing is to be accomplished.

(C) Identification of the specific attributes to be inspected which reflect the quality of the finished product.

(ii) Quality control sampling and testing results may be used as part of the acceptance decision provided that:

(A) The sampling and testing has been performed by qualified laboratories and qualified sampling and testing personnel.

(B) The quality of the material has been validated by the verification sampling and testing. The verification testing shall be performed on samples that are taken independently of the quality control samples.

23 CFR Ch. I (4-1-21 Edition)

(C) The quality control sampling and testing is evaluated by an IA program.

(iii) If the results from the quality control sampling and testing are used in the acceptance program, the STD shall establish a dispute resolution system. The dispute resolution system shall address the resolution of discrepancies occurring between the verification sampling and testing and the quality control sampling and testing. The dispute resolution system may be administered entirely within the STD.

(iv) In the case of a design-build project on the National Highway System, warranties may be used where appropriate. See 23 CFR 635.413(e) for specific requirements.

(2) The IA program shall evaluate the qualified sampling and testing personnel and the testing equipment. The program shall cover sampling procedures, testing procedures, and testing equipment. Each IA program shall include a schedule of frequency for IA evaluation. The schedule may be established based on either a project basis or a system basis. The frequency can be based on either a unit of production or on a unit of time.

(i) The testing equipment shall be evaluated by using one or more of the following: Calibration checks, split samples, or proficiency samples.

(ii) Testing personnel shall be evaluated by observations and split samples or proficiency samples.

(iii) A prompt comparison and documentation shall be made of test results obtained by the tester being evaluated and the IA tester. The STD shall develop guidelines including tolerance limits for the comparison of test results.

(iv) If the STD uses the system approach to the IA program, the STD shall provide an annual report to the FHWA summarizing the results of the IA program.

(3) The preparation of a materials certification, conforming in substance to appendix A of this subpart, shall be submitted to the FHWA Division Administrator for each construction project which is subject to FHWA construction oversight activities.

(b) In the case of a design-build project funded under title 23, U.S.

17.2 Appendix 2: METS/GS Directive-03

METS/GS Directive

Number: METS/GS-03

Materials Engineering and Testing Services
and Geotechnical Services

Effective Date: January 31, 2013

Title: **METS Guidelines for Projects Administered by External Implementing Agencies on the State Highway System**

BACKGROUND

Changes in funding due to legislation have resulted in funds being allocated more frequently to transportation agencies other than Caltrans. These agencies are with increasing frequency choosing to perform construction administration themselves. Deputy Directive 90 *Funding of Quality Management Work on State Highway Projects* outlines the quality management work that Caltrans will perform for projects on or proposed for the State Highway System (SHS). Quality assurance and quality verification work performed by METS are impacted by these changes.

DIRECTIVE

METS will no longer provide laboratory testing or source inspection services for construction projects administered by external implementing agencies on the SHS. For projects advertised, awarded and administered by external implementing agencies, source inspection will be performed by that agency and Caltrans serves in an oversight capacity.

PURPOSE

When external implementing agencies administer a project on the SHS, they are fully responsible for verification activities and acceptance of the material for the project. For these projects, Caltrans takes on an oversight role in which METS staff no longer sample, test, or inspect materials specific to these projects. Instead, METS provides oversight of the external implementing agency's source inspection quality assurance program.

Any specialty testing that METS will provide shall be specifically identified in the Project Cooperative Agreement.

This Directive ensures that project risk is allocated to the responsible parties, and aligns METS role with the responsibilities of other Department units.

The *METS IQA and Oversight Guidelines for Projects Administered by External Implementing Agencies on the State Highway System* (available at <http://onramp.dot.ca.gov/hq/des/Mets/>) is the new METS guide for Independent Quality Assurance (IQA) and oversight procedures of external implementing agencies. This document provides METS staff with guidance to ensure that external implementing agencies have an adequate Source Inspection Quality Management Plan (SIQMP), how to oversee execution of the approved SIQMP, and how to identify the role of METS in these projects.

DEFINITIONS

Implementing Agency is the entity that performs advertises, awards and administers (AAA) a construction contract on the State Highway System.

External Implementing Agency is a transportation agency other than Caltrans that AAAs a construction contract on the State Highway System.

Independent Quality Assurance (IQA) are oversight activities performed by Caltrans to ensure that work performed by the implementing agency is being performed in accordance with approved quality management plans.

Source Inspection(s) are the activities performed by an Implementing Agency to determine the acceptance of materials prior to arrival at the construction site. These activities may include verification sampling, testing and inspection.

RESPONSIBILITIES

METS/GS Deputy Division Chief

Ensures all METS/GS managers and supervisors are aware of this Directive and any revisions to this Directive. Acts as the State Materials Engineer and has the authority to modify Cooperative Agreements. Only the State Materials Engineer or his designees may enter into Cooperative Agreements, modify existing Cooperative Agreements, and approve SIQMPs.

METS Managers

Ensures all METS employees are aware of this Directive and any revisions to this Directive. Monitors and assesses the need for any necessary changes to the guidelines and reviews feedback provided by the Materials Administrator.

METS Supervisors

Ensures all METS employees are aware of this Directive and any revisions to this Directive. Confirms the requirement for specialty testing per the Cooperative Agreement prior to deploying any specialty testing. Ensures that staff are working only on appropriately authorized work. Participates with Managers in the review of feedback provided by the Materials Administrator

METS Materials Administrator (materialsadministratormets@dot.ca.gov)

Will monitor and gather feedback on issues and proposed changes to SIQMP guidance material. The Materials Administrator will also generate a quarterly report to Managers and Supervisors consolidating and highlighting issues.

METS Staff

Ensure compliance with all requirements of this Directive. Testing and dispatching personnel are responsible for checking the METS Intranet website <http://onramp.dot.ca.gov/hq/des/Mets/> to verify METS service level. Staff are responsible for seeking supervisor approval prior to specialty testing work. Provide feedback to the Materials Administrator as issues are identified.

METS Oversight Structural Materials Representative (OSMR)

OSMR is responsible for coordinating METS activities for all projects by external implementing agencies within their geographic area. The OSMR also determines status of projects, and updates the database.

APPROVED

PHILIP J. STOLARSKI
State Materials Engineer
Deputy Division Chief
Materials Engineering and Testing Services
and Geotechnical Services
Division of Engineering Services

1-30-13
Date



17.3 Appendix 3: Deputy Directive 90 (DD-90-R1)

California Department of Transportation

Deputy Directive

Number: DD-90-R1

Refer to

Director's Policy: DP-03, Safety and Health
 DP-06, Caltrans' Partnerships
 DP-07, Project Delivery
 DP-08, Transportation System
 Management and
 Operation (TSMO)
 DP-10, Departmental Commitments
 DP-14, Quality in Caltrans

Effective Date: 12/21/2018

Supersedes: DD-90 (12/01-2006)

Responsible

Program: Project Delivery,
 Division of Project Management

TITLE Funding of Quality Management Assessment on State Highway System

POLICY

The California Department of Transportation (Caltrans), as owner/operator of the State Highway System (SHS) is obligated to perform Quality Management Assessment (QMA) for all projects on its system.

For capital projects implemented by others, Caltrans will perform QMA at State expense unless any of the following conditions apply, in which case, Caltrans shall be reimbursed for QMA:

- 1) The implementing agency is a non-governmental entity,
- 2) The proposed project will generate revenue (e.g. managed lanes, toll roads and toll bridges). Reimbursement for QMA will not be sought during the Project Approval and Environmental Document (PA&ED) component of the proposed revenue generating project,
- 3) Is otherwise required by law,
- 4) Both parties agree reimbursement is appropriate and documented in a cooperative agreement.

DEFINITION/BACKGROUND

Quality Management Assessment as defined in Deputy Directive 23-R2, Roles and Responsibilities for Development of Projects on the State Highway System, is the systematic activities by the owner/operator that verifies the implementing agency's quality assurance program effectiveness and precede the owner/operator approval.

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."



Deputy Directive
 DD-90-R1
 Page 2

Non-governmental entity refers to all private and nonprofit establishments that do not meet the standards of a qualified organization per Government Code section 65967(b)(2) in conjunction with 65965(h) - Chapter 6.4 Mitigation Lands: Nonprofit Organizations.

RESPONSIBILITIES

Deputy Director, Project Delivery:

Ensures Project Delivery Programs work with appropriate division and district offices to develop policies, guidelines and procedures to implement this directive.

District Directors:

- Identify, request and assign the resources needed to perform QMA as part of the annual budget process.
- Execute cooperative agreements that include Caltrans' reimbursement in accordance with this directive.
- Implement this directive.

Chief, Division of Accounting:

Develop financial accounting and invoicing methodologies to accommodate QMA expenditures.

Chief, Division of Project Management:

- Monitor compliance of this directive.
- Develop allocation and expenditure methodologies from which to track and report activities and budget expenditures specifically related to QMA.

District Deputies, Branch Chiefs, Project Managers, and Task Managers:

- Ensure cooperative agreements are developed in accordance with this policy.
- Provide quality and timely products, services and information that reflect QMA expenditures.
- Document and communicate any change or problem that could impact the efficient delivery of a project or project component budget to appropriate personnel or agency.
- Accurately document time and resources expended performing QMA to ensure proper reimbursement.

APPLICABILITY

All Caltrans employees involved with project direct work.



RYAN CHAMBERLAIN
 Chief Deputy Director



Date Signed

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"



17.4 Appendix 4: The SIQMP Outline

Materials Engineering and Testing Services

Source Inspection Quality Management Plan (SIQMP) Outline
For Use by Implementing Agencies on the State Highway System



Division of Engineering Services

Revision Date
06/30/2022

State of California
Department of Transportation

Introduction

Policy

Per Caltrans Construction Procedure Directive (CPD) 08-5, and Deputy Directives 23-R2 and 90, when an agency other than Caltrans advertises, awards, and administers a project that is within the Caltrans right-of-way, a Construction Quality Management Plan (QMP) must be submitted by the agency for approval by Caltrans prior to issuance of any encroachment permits. If the implementing agency is providing verification source inspection, CPD 08-5 requires the implementing agency to prepare a separate Source Inspection Quality Management Plan (SIQMP).

Quality is an important element of successful project delivery. Caltrans has developed policies, procedures, and guidelines⁵⁻¹⁰ to facilitate the mandatory compliance with the Federal Highway Administration (FHWA) Title 23 requirements. Within Title 23, the FHWA describes Quality Assurance (QA) of materials for construction projects

The State Materials Engineer must approve the Source Inspection Quality Management Plan (SIQMP) prior to issuance of the encroachment permit for construction. The State Materials Engineer has delegated this authority to the Office of Quality Assurance and Source Inspection (OQASI).

Purpose

This document was created to assist the implementing agency in the development of their SIQMP, as it relates to all materials manufactured or fabricated away from the jobsite. The SIQMP outline provides a template that implementing agencies can use to describe their QA Acceptance Program. This includes verification source inspection and material acceptance activities. This document brings relevant information together from many Caltrans references for the convenience of the implementing agency. The implementing agency should provide a SIQMP approximately equivalent to that of Caltrans⁹. To eliminate any perceived conflict of interest the implementing agency must not delegate verification inspection, sampling and testing responsibilities to the Contractor.

SIQMP Implementation

The implementing agency will submit the SIQMP to the Oversight METS Representative (OMR) for the project and include a copy to the Caltrans Project Manager or Oversight Engineer for the project. The following link contains the latest OQASI contact information: <https://mets.dot.ca.gov/metsrepresentatives.php>

The OMR will review the implementing agency's SIQMP. In order to expedite the review and approval of the SIQMP, OQASI will require the most current Plans and Specifications for the project be submitted along with the cooperative agreement. Once approved in writing, the

SIQMP will be the guiding document for management of materials that are fabricated or produced outside of the jobsite. An example approval letter is shown in Appendix 2.

The Contractor must perform quality control as outlined in the project documents. The implementing agency's QA Acceptance Program consists of acceptance activities, independent of the Contractor, which include:

- Verification of Contractor's QC process
- Verification inspection
- Verification sampling and testing

Caltrans OQASI will perform Quality Management Assessment (QMA) through periodic audits to ensure that the approved acceptance activities outlined in the SIQMP are followed.

OQASI will communicate the QMA audit findings through periodic status reports submitted to the Oversight Engineer. These reports are based on an evaluation of the implementing agency's adherence to the SIQMP. They will describe and track any SIQMP deviations. Upon completion of the source inspection activities and resolution of all outstanding QMA findings, OQASI will provide a written letter stating that the project is in compliance with the approved SIQMP. See example letter in *Appendix 3*.

SIQMP Outline

It is recommended that the SIQMP be divided into the following three sections:

Below is a recommended breakdown of each section with example sub-sections to help the implementing agency produce an effective SIQMP. OQASI will review the SIQMP, which defines the implementing agency's verification source inspection for compliance with general industry standards and practices.

1. Project General Description

The intent of this section is to provide the project's basic information. This information will provide the foundation for efficient QMA by Caltrans.

- 1.1** Indicate the planned advertise, award, and completion dates
- 1.2** Indicate the Caltrans Standard Plans and Specifications editions to be used
- 1.3** Description of funding source(s) and applicability of Buy America provisions
- 1.4** Applicability of the Buy Clean California Act
- 1.5** Provide a copy of the Cooperative Agreement
- 1.6** Provide scope of work to include at a minimum the following:
 - Number and type of structures
 - Engineer's estimate
 - Project Limits
- 1.7** Describe the anticipated phasing, including the timeline for each phase, and main items of work to be completed in each phase of work.

2. Materials Management

The goal of this section is to provide the implementing agency the opportunity and flexibility to describe their materials management process. Some of the typical references are provided in Appendix 5, References, for the benefit of the implementing agency.

Source inspection is an integral part of an effective QA Acceptance Program. Verification source inspection helps to ensure that structural materials incorporated into the State Highway System comply with contract requirements with regard to raw materials, fabrication processes, personnel certifications, and in-process QC testing. The purpose of verification source inspection is to:

- Verify that adequate off-site QC is in place
- Perform verification sampling and testing of representative material
- Perform necessary in-process verification inspections

- Perform Non-Destructive Testing at appropriate times
- Mitigate issues before the material is shipped to the jobsite
- Decrease the potential for project delays that verification sampling at the jobsite may cause

A QA Acceptance Program includes an assessment of all materials based on importance. The appropriate level of source inspection is conducted based on this assessment. As an example, materials with a higher consequence of failure may require source inspection 100% of the time while materials with less risk require less frequent inspection. The goal of this section is for the implementing agency to describe their verification source inspection process.

2.1. Roles and Responsibilities

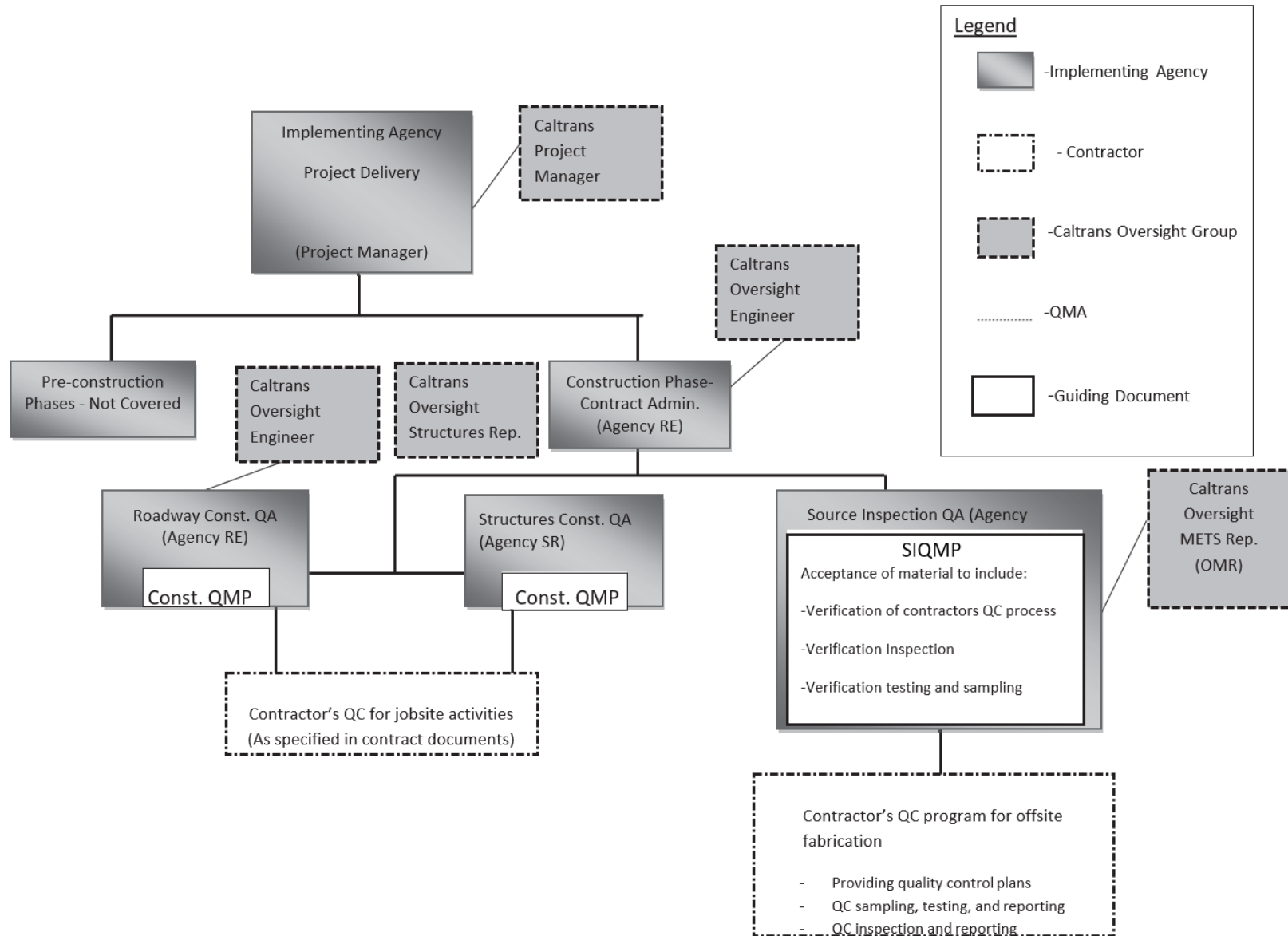
Provide an organizational chart of the key positions to be filled by the implementing agency and Contractor. An acceptable framework is shown on Figure 2. Provide supporting documents with the names, certifications, licenses, and responsibilities for each position. When applicable, the documentation should include:

- i.** Professional Engineer (PE) serving as Agency Resident Engineer or equivalent
- ii.** Agency Assistant Resident Engineers or equivalent
- iii.** PE serving as Agency Structure Representative or equivalent
- iv.** Agency Assistant Structure Representative or equivalent
- v.** PE serving as Agency Materials Representative or equivalent
- vi.** Agency Source Inspectors for Precast Concrete (PE or PCI Level II)
- vii.** Agency Steel Inspectors (CWI)
- viii.** Agency Non-Destructive Steel Inspectors (ASNT TC1A Level II)
- ix.** Agency Coatings Inspectors (NACE certified)

Provide the following information, when available:

- x.** Contractor's Quality Control Manager
- xi.** Contractor's Quality Control Concrete Inspectors (PE or PCI Level II)
- xii.** Contractor's Quality Control Source Steel Inspectors (CWI)
- xiii.** Contractor's Non-Destructive Steel Inspectors (ASNT TC1A Level II)
- xiv.** Contractor's Coatings Inspectors (NACE certified)

Figure 2: Construction Phase Quality Management Responsibilities



2.2. Verification Source Inspection and Documentation

The implementing agency should categorize materials based on the level of importance for their project and should determine the appropriate level of source inspection required.

- 2.2.1.** Describe the system used to identify which products will be source inspected by the agency (for example, all structural items categorized as “catastrophic consequences of failure” or “significant safety concerns” should be source inspected by the agency, while less critical items may be source inspected only on a periodic basis or inspected on site).
- 2.2.2.** Describe the process by which fabrication facilities or materials are evaluated or pre-qualified for the project. Note: The use of Caltrans approved programs is at the discretion of the implementing agency. The implementing agency assumes all responsibility for material coming from these facilities. Also note that for Caltrans implemented projects additional QA processes are employed at these facilities in order to accept source inspected materials.
- 2.2.3.** Provide a complete list of materials in a table with estimated quantities that are used in Caltrans right of way (ROW). For each material indicate whether it is inspected/sampled at the source and/or in the field.
- 2.2.4.** For materials inspected/sampled at the source, provide frequency of verification inspection/sampling at the source and general source inspection procedure.
- 2.2.5.** Identify any specialty materials for this project (e.g. proprietary systems).
- 2.2.6.** Describe any items that are outside of the Caltrans ROW that will meet different criteria than this SIQMP outline and how items in Caltrans ROW will be distinguished and separated.
- 2.2.7.** Describe the process by which the Contractor notifies the agency of suppliers/fabricators for each material item that requires source inspection.
- 2.2.8.** Documentation: Every inspection must be documented and a report produced. Systematic documentation is a key component of the QA Acceptance Program. Documentation provides necessary information for QMA audits as well as any future audits by FHWA, etc. In order to facilitate these audits, documentation needs to be organized and easily accessible.

2.2.8a Include the following sample forms:

- i. Verification inspection forms including:

- Source inspection/material verification
- Verification sampling of material
- Precast Reports
- Welding Reports
- Non-Destructive Testing Reports
- Issues/Non-conformance Reports
- Issue/Non-conformance Resolution Reports
- Others as needed

ii. Verification Compliance forms and/or material acceptance forms

2.2.8b Describe the procedures for review and distribution of inspection and material release forms

2.2.8c Describe how the implementing agency will perform final materials acceptance and certify that the approved SIQMP procedures were followed during the life of the project

2.2.8d Describe the materials filing system and the physical location it may be reviewed during audits

2.3. *Verification Lab Testing and Documentation*

A verification sampling and testing program must be established by the implementing agency. In order to avoid an appearance of a conflict of interest, any qualified private laboratory shall perform only one of the following types of testing on the same project: Verification testing, QC testing, or dispute resolution testing.

2.3.1. Describe verification lab qualifications for the applicable materials on this project (e.g. ISO 17025 for steel, and AASHTO Accreditation Program (AAP) for concrete).

2.3.2. Provide a list of verification tests to be performed by the implementing agency along with the frequency and applicable industry standards to be used/specified (ASTM, CTM, etc.). A template for the list is provided in Appendix 4.

2.3.3. Describe the verification materials testing filing system and the physical location it may be reviewed during audits.

2.3.4. Provide example forms that will be used for sampling material and reporting test results.

2.3.5. Provide a statement that there are no conflicts of interest regarding the verification lab and any other acceptance activities for the project.

2.4. Contractor Quality Control Plans

Part of an effective QA Acceptance Program is to assure that an effective Contractor QC Program is in place. QC Plans are an important part of a QC Program as they help to ensure the Contractor is following project requirements with regard to material, fabrication, testing, and inspection practices.

- 2.4.1.** Generate a detailed procedure for implementing agency's review of QC plans including:
- i.** Indicate the individual responsible for performing each review
 - ii.** Documentation of the reviews and addendums (e.g. example forms)
 - iii.** Filing of the reviews and addendums
- 2.4.2.** For each activity/process listed below, a pre-operation meeting is typically specified in Caltrans specifications to verify the Contractor understands his role in the QC process, the flow of information is understood, and the schedule of activities is determined by:
- Welding and Non-Destructive Testing
 - Precasting
 - Painting
 - Other special operations

For the meetings noted above, please provide the following details:

- Who is required to attend the pre-operation meetings
- Type of meeting (teleconference, in person, video conference, etc.)
- Goal of each type of meeting
- Method of filing the meeting minutes

2.5. Issue Resolution

A thorough QA Acceptance Program includes guidelines for issue resolution. The implementing agency should provide a description of their issue resolution process, how it is concluded, and how it is documented.

- 2.5.1.** Describe the process for issues resolution (such as requests for information (RFIs), nonconformance reports (NCRs), or deviations to the contract related to source inspection) including:
- Procedures for notification to the source, owner's and contractor's inspection staff
 - Procedures for documenting decisions
- 2.5.2.** Describe when the unit responsible for verification activities is required to write non-conformance reports (NCRs) to document issues related to:

- Product
- QC Processes

2.5.3. Describe the policy and/or procedures for handling a disagreement between owner's and contractor's inspection staff.

3. Reporting QA Verification Documentation to Caltrans QMA

3.1. Monthly Summary Report

On the 1st of each month the implementing agency must produce a SIQMP Monthly Summary Report that describes the materials acceptance activities performed for that period. The report should be sent to the Oversight METS Representative (OMR) for the project. The following link contains the latest OQASI contact information:

<https://mets.dot.ca.gov/metsrepresentatives.php>

The report will include at a minimum the following:

- i. A statement verifying continued compliance with the SIQMP signed by the implementing agency
- ii. Response to Caltrans QMA audit findings
- iii. Summary of verification source inspection work completed over the reporting period and summary of work anticipated in the next period
- iv. Summary of NCRs issued and status of those outstanding
- v. Summary of any changes to the plans or specifications
- vi. Summary of EPDs received and still pending

During an audit the supporting documentation is to be provided within 10 working days. Examples of supporting documentation include:

- Verification NCRs
- Verification inspection reports
- Material Test Reports (MTRs) by the Contractor
- Certificates of Compliance (COCs) by the Contractor
- Implementing agency submittal review comments for:
 - Contractor-submitted Quality Control plans
 - Structural and fabrication related QC reports

3.2. Final Acceptance Letter

The implementing agency Resident Engineer shall provide a stamped letter for the final materials acceptance and certification stating that the approved SIQMP procedures were followed during the life of the project.

SUMMARY

It is the intent of OQASI to assist the implementing agency in adopting a meaningful materials management system that includes inspection, sampling, and testing both by the Contractor through QC and by the implementing agency through verification activities. Cooperation between the implementing agency and Caltrans helps ensure materials quality resulting in on time and within budget project delivery. The SIQMP provides a platform for the implementing agency to incorporate effective material management strategies and communicate them to Caltrans

Appendices

Appendix 1: Definitions

Appendix 2: Example of SIQMP Approval Letter

Appendix 3: Example Closeout Action Letter Stating the Project is in Compliance with SIQMP

Appendix 4: Template for Materials Verification Testing List

Appendix 5: References

1. Definitions

Contractor - The Prime Contractor, responsible for the construction of the project.

Cooperative Agreement (Co-op) - A formal, legally binding contract between Caltrans and the Implementing Agency. Cooperative agreements outline roles, responsibilities and respective obligations, including cost sharing, of the participants and may address more than just the project construction. Cooperative agreements and maintenance or ownership obligations are required when exchanges of funds or commitments of resources occur. Once signed by an authorized representative of the other party and an attorney representing Caltrans, the agreement becomes legally binding and becomes the highest authority in the hierarchy of contract documents.

CPD 08-5 - Construction Procedure Directive regarding Quality Management Work on State Highway Systems.

Design-Bid-Build - Refers to the standard Caltrans project whereby Caltrans does the design of the project, and the project is awarded to a bidding contractor who will then construct the project.

Design-Build - Refers to a project where the Contractor is responsible for both the design and construction of the project.

Encroachment Permit - A permit issued by Caltrans granting permissive authority to enter the state right-of-way and construct approved facilities. An encroachment permit is an enforceable contract when accepted by the permittee. Acceptance of all terms of the encroachment permit is acknowledged when any act or work specified under the permit is performed. An encroachment permit does not convey a real property right. It authorizes only the permittee or permittee's agent to perform work within the state right-of-way. The permittee may not transfer or assign an encroachment permit to another party. The Implementing Agency and the contractor performing the work require dual permitting. The structure representative obtains copies of encroachment permits from the Implementing Agency project manager or the resident engineer. As part of a cooperative agreement, encroachment permits are typically required as a means to perform construction activities in Caltrans right of way.

Federal-aid Project - Any project that has received any funding from the Federal Highway Administration (FHWA).

Final Acceptance Report – A report produced by the Oversight Resident Engineer for the implementing agency stating acceptable completion of the project. This final acceptance report is based on OQASI's final report recommending acceptance of the project for Structural Material related work.

Highway improvement agreement – Essentially a highway improvement agreement is a cooperative agreement with a private entity. Highway improvement agreements are not covered in this outline.

Implementing agency - The entity charged with the successful completion of each project component, as defined in Government Code Section 14529(b):

- Project initiation document.
- Completion of all permits and environmental studies. Preparation of plans, specifications, and estimates.
- The acquisition of right-of-ways, including, but not limited to, support activities. Construction, construction management, and engineering including surveys and inspection.

There could be a different implementing agency for each component of a project. To ensure clear lines of responsibility, only one agency can be the implementing agency for a single component.

Independent Assurance (IA) - Management tool that requires a third party, not directly responsible for process control or acceptance, to provide an independent assessment of the product and/or the reliability of test results obtained from the process control and acceptance testing. (The results of IA tests are not to be used as the basis of product acceptance.) This definition differs from that of 23 CFR 637, which defines IA programs as “activities that are an unbiased and independent evaluation of all sampling and testing procedures used in the acceptance program.”

Quality Management Assessment (QMA) - Activities performed by Caltrans at a project level to ensure that the implementing agency's quality-assurance activities result in projects being

developed in accordance with Caltrans standards, policies, and practices and in accordance with the QMP provided by the implementing agency.

Local Agency - Any public entity such as a federal, state, or regional transportation planning agency, county, city, or other local government unit that sponsors or administers a construction contract on the state highway system. In addition, a private entity that sponsors or administers construction contracts on behalf of an agency on the state highway system, unless otherwise noted, is considered a part of the local agency for the purpose of this guideline.

METS - Materials Engineering and Testing Services.

Office of Quality Assurance and Source Inspection (OQASI) – An office within Materials Engineering and Testing Services (METS). The primary objective of OQASI is to provide uniform objective quality assurance evaluations of a large number of structural materials and other products that are a vital part of highways and bridges.

OQASI Oversight Activity Report - An intermittent report that communicates OQASI's QMA activities, findings, and the status of all issues.

Oversight Engineer (OSE) - A Caltrans employee who performs Quality Management Assessment (QMA) of the activities being performed by the resident engineer, the local agency structure representative, and others assigned to a construction project. The Oversight Engineer is the local agency's primary Caltrans contact. The Oversight Engineer assures compliance with applicable state and federal regulations, contract requirements, Caltrans standards and practices, encroachment permit, and cooperative-agreement requirements. For federal-aid projects, the Oversight Engineer performs QMA of the quality assurance work performed by the local agency for the entire project. For non-federal-aid projects, the Oversight Engineer performs QMA on only the portion of the project within the existing or future state right-of-way. The Oversight Resident Engineer and Oversight Structure Representative are examples of Oversight Engineers.

Oversight Non-Conformance Report - A report issued by the Oversight RE to the implementing agency that reports deviations from the QMP. A resolution is required to close out the issue.

Oversight Project - Any project with a construction cost within the existing or future state highway right-of-way of \$300,000 or greater where the local agency administers the construction contract. Oversight projects are financed in whole or in part by a local agency. Oversight projects with an estimated construction cost of \$1 million or more are constructed under the terms of a cooperative agreement and encroachment permit. Most oversight projects with an estimated construction cost of less than \$1 million are constructed under the terms of an encroachment permit only. Certain projects such as those involving signal construction, landscaping, or sound walls, may require an agreement.

Oversight METS Representative (OMR) - A Caltrans Office of Quality Assurance and Source Inspection employee who is assigned to assist the OSE with QMA activities.

Oversight Structure Representative - An employee of Caltrans Office of Structures Construction who assists the Oversight Engineer in performing oversight over the implementing agency structure representative’s activities relative to structure portions of a project.

Quality Assurance (QA) - Table 1 shows a variety of definitions used for QA. For the purpose of this document the definition provided by the Code of Federal Regulations (23 CFR 637B) is used.

Table 1 – Various Definitions for Quality Assurance and Quality Control

Term	23CFR637B (1995)	Construction Manual Supplement for Local Agency’s Resident Engineers (LARE)	ACI (ACI Concrete Terminology, August 2010)
Quality Assurance	All those planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.	Activities performed within the implementing agency during the project-delivery process that provides the confidence that the project team is fulfilling established project requirements and expectations.	Actions taken by an organization to provide and document assurance that what is being done and what is being provided are in accordance with the contract documents and standards of good practice for the work.
Quality Control	All contractor/vendor operational techniques and activities that are performed or conducted to fulfill the contract requirements.	Operational processes, practices, and activities performed at the project team level during the project delivery process to ensure that the product meets the project’s purpose and need and fulfills established quality requirements.	Actions taken by an organization to provide control and documentation over what is being done and what is being provided so that the applicable standard of good practice and the contract documents for the work are followed.

Quality Assurance Acceptance Program – All factors that comprise the implementing agency’s determination of the quality of the product as specified in the contract requirements. These factors include verification sampling, testing, and inspection and may include results of quality control sampling and testing.

Quality Control (QC) - Table 1 shows a variety of definitions used for QC. For the purpose of this document the definition provided by the Code of Federal Regulations (23 CFR 637B) is used.

Quality Management Plan (QMP) - Per CPD 08-5, when an agency other than Caltrans advertises, awards, and administers a project that is within the Caltrans right-of-way, a Quality Management Plan (QMP) must be submitted by the agency for approval by Caltrans prior to issuance of the encroachment permit. If the implementing agency is providing its own source inspection, CPD 08-5 requires the implementing agency to prepare a separate Source Inspection Quality Management Plan (SIQMP). The State Materials Engineer, or authorized delegate (Quality Assurance and Source Inspection Senior), must approve the SIQMP prior to issuance of the encroachment permit for construction.

Resident Engineer - Use in the same context as described within the Construction Manual, except, the resident engineer works for the implementing agency, not Caltrans. Resident engineer performs jobsite verification sampling, testing and inspection of the contractor's QC operations.

Source Inspection Quality Management Plan (SIQMP) – A Quality Management Plan specific to Quality Assurance Source Inspection that is developed by the implementing agency. As stated in Construction Procedure Directive (CPD) 08-5, this document must be approved by the State Materials Engineer before an encroachment permit can be granted.

Verification – Sampling, testing, and inspection performed to validate the quality of the product

2. Example SIQMP Approval Letter

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
TRANSPORTATION LABORATORY – MS-5
5900 FOLSOM BOULEVARD, ROOM 101
SACRAMENTO, CA 95819-4612
www.dot.ca.gov



February 7, 2012

George Washington
Bay Area Rehabilitations Agency
Project EA: 04-123456

Dear Mr. Washington:

On January 17, 2012, the Office of Quality Assurance and Source Inspection (OQASI) received the Bay Area Rehabilitation Agency's Source Inspection Quality Management Plan (SIQMP) associated with the North Bay Rehabilitation Project, 04-123456.

On behalf of the State Materials Engineer per delegated authority, the SIQMP substantially complies with the Source Inspection Quality Management Plan Outline for Use by Implementing Agencies and is approved.

It is important to note that the SIQMP acceptance does not relieve the Bay Area Rehabilitation Agency of its obligation to ensure that materials incorporated into the project by the Contractor are in compliance with all contract plans and specifications.

The SIQMP is to be used by the Bay Area Rehabilitation Agency as a guide for verification of work leading to the acceptance of materials at the completion of the project.

Please inform the Oversight METS Representative for the project, Sam Adams, of any changes to the start of work date so that OQASI may coordinate our auditing activities. He may be reached at (707) 123-4567.

Sincerely,

ABRAHAM LINCOLN
Chief, Quality Assurance and Source Inspection Branch, Springfield
Office of Quality Assurance and Source Inspection
Materials Engineering and Testing Services
Division of Engineering Services

c: District Encroachment Permit Engineer
METS Materials Administrator
DES Chief, Office of Project Delivery

"Provide a safe and reliable transportation network that serves all people and respects the environment"

3. Example Closeout Action Letter Stating the Project is in Compliance with SIQMP

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
TRANSPORTATION LABORATORY – MS-5
5900 FOLSOM BOULEVARD, ROOM 101
SACRAMENTO, CA 95819-4612
www.dot.ca.gov



March 13, 2012

George Washington
Bay Area Rehabilitations Agency
Project EA: 04-123456

Dear Mr. Washington:

Based on auditing activities performed by the Office of Quality Assurance and Source Inspection (OQASI) it appears that the Bay Area Rehabilitations Agency has effectively implemented the Source Inspection Quality Management Plan associated with North Bay Rehabilitation Project, 04-123456 approved on February 1, 2012.

If you have any questions related to this recommendation, please contact the Oversight METS Representative for the project, Sam Adams. He may be reached at (707) 123-4567.

Sincerely,

ABRAHAM LINCOLN
Chief, Quality Assurance and Source Inspection Branch, Springfield
Office of Quality Assurance and Source Inspection
Materials Engineering and Testing Services
Division of Engineering Services

c: District Encroachment Permit Engineer
METS Materials Administrator
DES Chief, Office of Project Delivery

4. Template for Materials Verification Testing List

Material	Amount of material to be tested	Samples Taken	Tests performed
1. Prestressing Steel Strand	2 Strand Packs	1	ASTM A370 ASTM E8
2. High Strength Fasteners	Lot size: 281-500 assemblies	5	ANSI/ASME B1.2 A 370 ASTM B 499 ASTM E 8 ASTM E 10 ASTM E 18 ASTM F 606
3. Mechanical Couplers	Lot size: 150	4	ASTM A 370 ASTM E 8 CT 670

5. References

1. CFR Title 23
2. Construction Procedure Directive (CPD) 8-5: Quality Management Work on the State Highway System (Eliminated)
3. Deputy Directive DD-23-R2, Roles and Responsibilities for Development of Projects on the State Highway System
4. Deputy Directive DD-90, Funding of Quality Management Work on State Highway Projects
5. Construction Policy Bulletin (CPB) 9-6: Oversight Project Completion Checklist
6. CEM-6302 Final Materials Certification
7. CEM-6303 Final Acceptance Checklist for Federal-Aid High Profile Projects
8. Construction Manual Supplement for Local Agency Resident Engineers (LARE)
9. Local Assistance Procedures Manual (LAPM)
10. Local Agency Structure Representative Guidelines (LASR)
11. Quality Assurance and Source Inspection Manual (QASI Manual)
12. Oversight Field Engineers Guidelines

Some of these documents discuss the option for Caltrans to perform verification source inspection for an outside implementing agency. However, this happens very infrequently and must be established with the Chief of Office of Quality Assurance and Source Inspection prior to issuing the cooperative agreement.

Below is a summary of the documents and information on how to access them.

1. *CFR Title 23:*

From Title 23 FHWA Subchapter A – General Management and Administration:

“The purpose of the regulations in this part is to implement and carry out the provisions of Federal law relating to the administration of Federal aid for highways.”

This regulation outlines the State Transportation Department’s requirement to develop a QA Acceptance Program which will assure that the materials and workmanship incorporated into each Federal-aid highway construction project on the National Highway System are in conformity with the requirements of the approved plans and specifications, including approved changes.

Link to CFR Title 23: <https://www.ecfr.gov/cgi-bin/text-idx?SID=f6f00ae4234e92e6f1fdebca562a3ba5&mc=true&node=pt23.1.637&rgn=div5>

2. *CPD 8-5: Quality Management Work on the State Highway System (Eliminated)*

On August 20, 2008, the Construction Procedure Directive (CPD) 08-5 was signed in order to provide guidance for Quality Management Work on the State Highway System.

This CPD states that when a government agency or private entity is the implementing agency (i.e. the entity that advertises, awards, and administers the construction contract), Caltrans performs Quality Management Assessment (QMA) services to ensure that quality management work is performed by the implementing agency as mandated by FHWA.

The CPD states the implementing agency should prepare and submit a separate source inspection Quality Management Plan. The State Materials Engineer must approve each source inspection quality management plan prior to issuance of the encroachment permit for construction. The State Materials Engineer will ensure that the implementing agency has prepared a quality management plan conforming to Caltrans standards.

Link to CPDs: <https://dot.ca.gov/programs/construction/construction-procedure-directives-cpds>

3. Deputy Directive 23-R2: Roles and Responsibilities for Development of Projects on the State Highway System

Link to DD-23-R2:

https://admin.onramp.dot.ca.gov/downloads/admin/deputy_directives/dd_23.pdf

4. Deputy Directive 90: Funding of Quality Management Work on State Highway Projects

Link to DD-90:

https://admin.onramp.dot.ca.gov/downloads/admin/deputy_directives/dd_90.pdf

5. CPB 9-6: Oversight Project Completion Checklist

Per CPB 9-6:

“Caltrans, the local agency, and the contractor review a locally administered state highway construction project before contract acceptance. This review identifies and then allows the contractor to address discrepancies before demobilizing and allows the local agency to avoid remobilization costs.”

Link to CPB 9-6: <http://www.dot.ca.gov/hq/construc/manual2001/CPBindex.HTM>

Links to referenced forms:

Link to CEM-6302 Final Materials Certification:

<https://construction.onramp.dot.ca.gov/downloads/construction/files/cinnov/Forms/CEM6302.pdf>

Link to CEM-6303 Final Acceptance Checklist for Federal-Aid High Profile Projects:
<https://construction.onramp.dot.ca.gov/downloads/construction/files/cinnov/Forms/CEM6303.pdf>

6. Construction Manual Supplement for Local Agency Resident Engineers (LARE)

Per LARE:

“The Construction Manual establishes policies and procedures for personnel engaged in contract administration. However, not all policies and procedures in the Construction Manual are applicable to local agencies or private entities when advertising, awarding, and administering projects. This supplement establishes which sections of the Construction Manual are applicable to local agency and private entity projects.”

Link to LARE: <https://dot.ca.gov/-/media/dot-media/programs/construction/documents/policies-procedures-publications/construction-manual/cm-supplement-lare-a11y.pdf>

7. Local Assistance Procedures Manual (LAPM)

Per LAPM:

“The Local Assistance Procedures Manual (LAPM) has been prepared to aid California local agencies scope, organize, design, construct and maintain their public transportation facilities when they seek Federal Highway Administration (FHWA) funded federal-aid or state funding. This manual describes the processes, procedures, documents, authorizations, approvals and certifications, which are required in order to receive federal-aid and/or state funds for many types of local transportation projects.”

Link to LAPM: <https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm>

8. Local Agency Structure Representatives Guidelines (LASR)

Per LASR:

“The purpose of this guide is to provide structure representatives with an efficient resource to help them determine their roles and responsibilities in administering structure portions of local agency construction contracts built on state right-of-way.”

Link to LASR: <https://dot.ca.gov/-/media/dot-media/programs/construction/documents/policies-procedures-publications/lasr-guidelines.pdf>

9. Office of Quality Assurance and Source Inspection – Quality Assurance and Source Inspection Branch (QASI) Manual

The QQASI - QASI Manual is a manual that details the practices and procedures of the Office of Quality Assurance and Source Inspection – QASI Branch.

Link to QASI Manual:

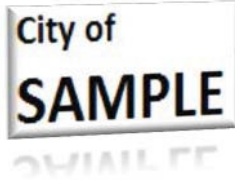
https://rock.dot.ca.gov/qualitysystem/documents/mets/ogasi/gasi/QASI_MANUAL.pdf

10. Oversight Resident Engineer Guidelines (OREG)

These guidelines provide a convenient source of information on policy and procedure, and should be used as a resource for Caltrans employees who provide QMA on projects administered by others on the existing or future state highway system.

Link to OREG: <https://dot.ca.gov/-/media/dot-media/programs/construction/documents/policies-procedures-publications/oversightguidelines.pdf>

17.5 Appendix 5: Sample SIQMP



**Source Inspection Quality Management Plan Sample
City Main Street Bridge Replacement**

Project No.: 123456

Caltrans EA: 07-XXXXX4

DRAFT FINAL

Prepared for:

Caltrans Materials Engineering and Testing Services (METS)

Attention: Caltrans Oversight METS Representative

June 30, 2022

Revision 0

Prepared by:

Sample City Materials and Testing Division (SC-MTD)

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Note: This Sample SIQMP contains no appendices. An actual SIQMP will contain appendices that have important required items such as sample forms, certifications for personnel and laboratories, or will contain added commentary on source inspection practices by the implementing agency.

This SIQMP is one example of source inspection practices and is not intended to direct local agencies with regard to how they approach source inspection.

Overview

This document is a sample Source Inspection Quality Management Plan (SIQMP) that was created to assist local implementing agencies with the development of a project specific SIQMP. Source Inspection relates to all materials manufactured or fabricated away from the jobsite that will be incorporated into the final work. The SIQMP outline found on the Agency Resources page of the Caltrans Materials Engineering and Testing Services website (<http://www.dot.ca.gov/hq/esc/Translab/OSM/agencyresources.htm>) provides an outline that implementing agencies can use to describe their QA source inspection and material acceptance activities. This Sample City SIQMP brings relevant information together from many Caltrans references for the convenience of the implementing agency and follows the SIQMP outline.

Where reference throughout this document is made to appendices, those are placeholders only as no sample appendices are included, e.g., no example personnel certifications or cooperative agreements. A final SIQMP for use on a project will be required to have the necessary supporting documents and/or appendices.

1. Project General Description

Table 1 presents the project general description.

Table 1: Project General Description

Project Description	Route 1 Main Street Bridge Replacement
Implementing Agency Name	City of Sample
Implementing Agency Project Manager (PM)	John F. Kennedy
Implementing Agency Project Number	123456
Caltrans Project Number	X7-XXXXX4
Project Route	Route 1

1.1. Project Planned Dates

Table 2 presents project planned dates

Table 2: Project Planned Dates

Project Award Date	10/10/2011
Project Advertised Date	5/10/2011
Project Notice to Proceed	11/10/2011
Project Completion Date	11/10/2013

1.2. Project Specifications Edition

Table 3 presents the edition of project Standard Specifications and Plans

Table 3: Project Specifications Edition

Caltrans Standard Specifications	May 2006 with Amendments Dated 08-05-11
Caltrans Standard Plans	2006 and Revisions

1.3. Federal Funding Status

Table 4 presents project federal funding status.

Table 4: Project Federal Funding Status

Federal Funding (Buy America Requirements)	Federally Aided Project – Buy America requirements will be enforced.
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1.4. Buy Clean California Act (BCCA)

Table 5 presents the BCCA status.

Table 5: BCCA Status

BCCA Requirements	BCCA requirements will be enforced. No materials subject to the BCCA will be installed without valid EPDs.
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Listing of Bid items subject to BCCA (based on expected quantities and threshold requirements)	59. 16" CIDH Piling - bar reinforcement 64. Minor Concrete (Minor Structures) – bar reinforcement 65. Minor Concrete (Pipe Encasement) – bar reinforcement 66. Precast I-Girders – bar reinforcement 72. Bar Reinforcing Steel (Bridge) 73. Bar Reinforcing Steel (Soundwall) 75. Furnish Sign Structure (Truss) – structural steel 81. Precast Drainage Inlets – bar reinforcement 82. 18" Reinforced Concrete Pipe – bar reinforcement 83. 72" Reinforced Concrete Pipe – bar reinforcement 88. Concrete Barrier (Type 60W) – bar reinforcement 89. Concrete Barrier (Type 60R) – bar reinforcement 90. Concrete Barrier (Type 736M) – bar reinforcement 91. Concrete Barrier (Type 736V) – bar reinforcement
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1.5. Project Documents

Table 6 lists the project documents.

Table 6: Project Scope of Work

Number and Type of Structures	Bridge replacement of one bridge with precast concrete I-girders and founded on steel pipe piles (Class N) and concrete piles, and construct 2100 LF of Soundwall of varying height along the Southbound Route 1 freeway.
Engineer’s Estimate	\$23,345,678.00
Project Limits	From 3 miles north on Route 1 and Sample River Overcrossing to 3 miles south of Route 1 and Main Street Undercrossing in Example County within Sample City.

1.5.1. Description of Bridge Work

The bridge work is on the Sample City Main Street Bridge (Bridge # 12-2456) and consists, in general, of:

1. Removing the existing Sample City Main Street Bridge. This includes removal of the cast in place bridge pier walls, retaining walls, curtain walls, type 2 barrier railing, miscellaneous metal cable restrainers, rock slope protection, bike path railing and bike path concrete.
2. Constructing a new Sample City Main Street Bridge. This work includes constructing abutments built on steel pipe piles as well as concrete piles, and building the bridge deck on precast prestressed concrete girders and PTFE Spherical Bearings. Bridge Construction also includes new concrete barrier rail, constructing diaphragm stiffeners, constructing masonry block soundwalls, constructing concrete barrier rail, and installing

“Decorativelight” brand poles (Sole source for this project).

Description of Existing Structure: A three-span reinforced concrete box girder and cast-in-place prestressed concrete box girder bridge on 6 column reinforced concrete bents and open end seated abutments, all supported on driven reinforced concrete and precast prestressed concrete piles.

Description of the Soundwall Work: The Soundwall work consists, in general, of constructing CIDH piling and a reinforced concrete pile cap and wall to support masonry block Soundwall.

1.6. Project Phasing

It is anticipated that this project would be completed in 4 phases. The phases and estimated timelines are as follows:

1. A temporary traffic and pedestrian detour to guide traffic along frontage roads to the South Sample City River Crossing Bridge near Z Street (1 week).
2. Partial bridge removal including pier walls, retaining walls and curtain walls (5 weeks).
3. Constructing new abutments built on steel pipe piles, installing PTFE Spherical Bearings, and precast I-girders (8 months).
4. Constructing masonry block, sound walls, concrete barrier rail, and light pole installation (5 months).

1.7. Additional Project Information

Table 7 presents additional project information.

Table 7: Additional Project Information

Name and Address of Construction Management Firm	SEPMIN and Associates, Inc. 123 East Main St., Sample City, CA 90000
Name and Address of Verification Firm for Construction	Sample City / SEPMIN and Associates, Inc. 123 East Main St., Sample City, CA 90000
Name and Address of Verification Lab for QA Source Inspection	Sample test Lab Company 11112 Central Main St., Sample City, CA 90000
Name and Address of Verification Firm for Source Inspection	Sample City Materials and Testing division 12121 H Street, Sample City, CA 90000
Name and Address of Contractor	John Schmidt Construction Inc. 1234 West Main St., Sample City, CA 90000

2. Material Management

In accordance with FHWA Title 23 requirements, the Prime Contractor will perform Quality Control (QC) as outlined in the project specifications and Sample City will implement a Quality Assurance (QA) acceptance program consisting of verification activities that are independent of

the Prime Contractor. Sample City Materials and Testing Division (SC-MTD) has created a comprehensive material priority list that is based upon the consequence of failure of materials. This priority list helps the Materials Representative (MR) determine the level of source inspection required. The priority list is described under section 2.2.1 of this document.

2.1. Roles and Responsibilities

A project organizational chart specific to the construction phase quality management responsibilities for Source Inspection is provided in Figure 1.

2.1.1. Agency Roles and Responsibilities

To supplement Figure 1, Table 8 below presents a List of Sample City Project Personnel and Qualifications.

Table 8: List of Project Personnel and Qualifications

Title	Name	Qualification	Company	Phone	Email
Resident Engineer (RE)	Grover Cleveland	Professional Engineer (PE) Civil California	Sample City / SEPMIN and Associates, Inc.	(123) 456-7890	G.Cleveland@mail.com
Structure Representative (MR)	George Washington	PE Civil CA	Sample City	(111) 222-3333	G.washington@mail.com
METS Representative (MR)	Abraham Lincoln	PE Civil CA	Sample City	(333) 111-2222	A.lincoln@mail.com
Concrete QA Inspector	John Adams	PCI Level II	Sample City	(111) 222-4444	J.adams@mail.com
Steel QC Inspector	Tom Jefferson	CWI	Sample City	(222) 444-5555	T.jefferson@mail.com
NDT QC Inspector	James Polk	ASNT NDT Level II UT	Sample City	(444) 555-8888	J.polk@mail.com
Coating Inspector	James Madison	NACE Level II	Sample City	(777) 444-2233	J.madison@mail.com

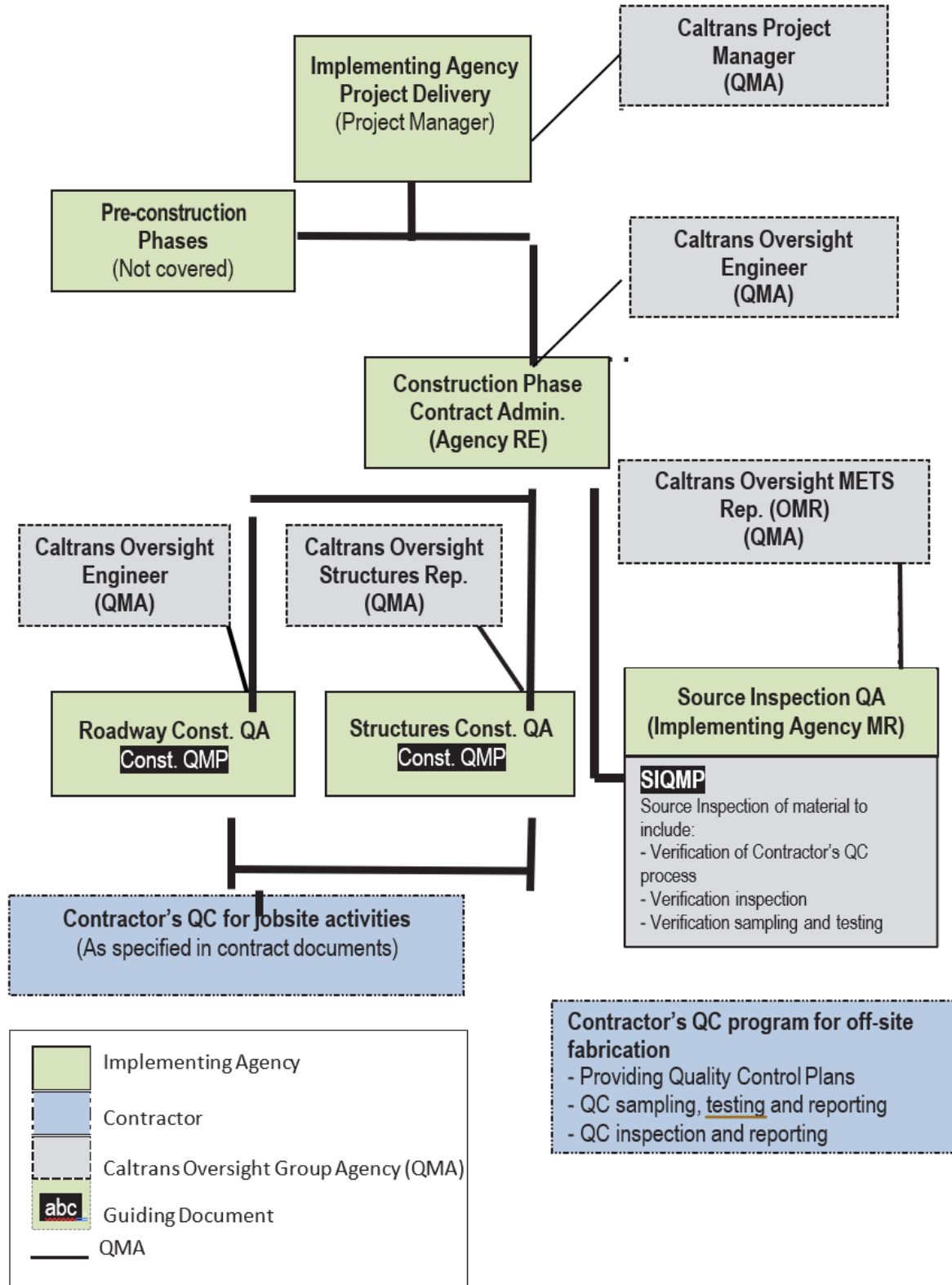


Figure 1: Construction Phase Quality Management Responsibilities for Source Inspection

2.1.2. Contractor Information

Table 9 summarizes minimum Quality Control qualifications for Contractor personnel as required by the project Special Provisions:

Table 9: Minimum Qualification for Contractor’s QC Personnel

Quality Control Manager (QCM) – Precast	Experienced in Quality Control and Concrete
Quality Control Manager (QCM) – Steel	AWS CWI or PE Civil CA
Concrete QC Inspector	PCI Level II or PE Civil CA
Steel QC Inspector	AWS CWI
NDT QC Inspectors	ASNT TC-1A Level II
Coating QC Inspectors	NACE Level II

2.2. Verification Source Inspection and Documentation

2.2.1. Procedure to Identify Materials for Source Inspection

Sample City will follow a similar system to the Caltrans procedure for identifying items that will require Source Inspection. Sample City has generated a “Materials Priority list” as described previously in Section 2. Each material bid item has been categorized in table 10 and is supplemented by section 2.2.4.1 which details the frequency of verification inspection for source inspected items.

- “Priority 1” materials are items with significant safety concern or high maintenance cost associated with a failure; these items normally have a QA inspector at the facility throughout the fabrication time period and a “tag” issued at completion along with a final inspection report. When multi-shift operations occur, either a single inspector will cover both shifts by splitting the shift, or multiple inspectors are assigned to ensure adequate quality assurance checks. Such inspection is considered “extensive” but inspectors are performing quality assurance checks only and are not required to be at the shop continuously. Priority 1 items are broken into Priority 1a, 1b, and 1c in section 2.2.4.1 where the source inspection process is more fully described.
- “Priority 2” materials are items with moderate safety concern or moderate maintenance cost. Normally part time QA inspection (Spot checks of in-process work at a single or multiple times during the fabrication time period) is conducted. A tag is normally issued at completion of work along with a final inspection report.
- “Priority 3” materials are items with low safety concern or low maintenance cost and normally require only field inspection and a Certificate of Compliance. Periodic spot checks may be made at the discretion of the MR.

In addition to the material priority list, the following additional criteria is used to determine the frequency and extent of Source Inspection by the MR:

- Past performance of the fabricator (confidence in the QC process).
- Special circumstances, e.g., (emergency or change order work) may require additional tracking/inspection.
- Past issues with the product performance.
- Unique or unusual characteristics or expectations.
- Warranties: Items with a warranty will normally not require source inspection.

2.2.2. Authorized Materials and Audited Facilities List

For some materials, the project Special Provisions will require that the Contractor use Authorized Materials that are prequalified by Caltrans. The Sample City MR may randomly sample materials that are provided on the project, including materials that are from Authorized Suppliers. In such cases, samples will be tested at the Sample City (or consultant lab hired by Sample City) accredited lab. Sample City is aware that the list of prequalified materials is accessible at the following link:

<https://dot.ca.gov/programs/engineering-services/authorized-materials-lists>

Where the Special Provisions require Caltrans audited facilities to be used, Sample City will require the Contractor to use such facilities for any materials provided on the project. In addition to the use of Caltrans audited facilities when required, Sample City has implemented a special procedure for any facilities that will be producing Priority 1 items. Once identified on a SC-3101 as a fabricator, the Sample City MR will make a pre-fabrication visit to Priority 1 fabricators to conduct a pre-job audit. For Priority 2 items, the MR may make a pre-fabrication visit. Sample City is aware that the list of audited facilities can be found at the following Caltrans link:

<https://mets.dot.ca.gov/afl/AuditedFacilitiesList.php>

For proprietary lighting, see Section 2.2.5 of this document.

2.2.3. List of Materials in the State Highway System (SHS)

A complete list of materials that are within the Caltrans SHS along with the estimated quantities and location of inspection performed are provided in Table 10.

2.2.4. Table of Items to be Source Inspected

Frequency of source inspection is dependent upon the Priority of each item. Table 10 indicates the Priority of each item listed. Table 10 is supplemented by section 2.2.4.1 which further describes the frequency of inspection.

2.2.4.1. Frequency of Source Inspection

This section further defines the inspection frequency for priority 1, 2, and 3 items.

- Priority 1: “Priority 1” materials are items with significant safety concern or high maintenance cost associated with a failure. Sample City intends to send an audit team to conduct a facility assessment for each item identified as Priority 1 in Table 10 prior to the start of work. Some exceptions may be made to this if a facility is not performing a significant portion of the work. The primary purpose of this assessment is to discuss the source inspection process including the need for the fabricator to notify Sample City in advance of the start of work, to discuss any required pre-meetings, to discuss the QC versus QA processes to be followed, and to identify any specific concerns of Sample City or the fabricator related to the product they will be supplying.

Priority 1a: Extensive QA Source Inspection

Priority 1a items on this project that have fabrication processes that are deemed as a high priority to see on an ongoing basis are the Class N Steel Pipe Piles, Truss Sign Structures and associated steel components, Precast/Prestressed Piles, and Precast/Prestressed Girders. For these items, a Sample City QA Inspector will be assigned to the fabrication facility on a full-time basis to provide extensive QA coverage. While not required to be present during all shifts, in general where multi-shift operations occur, either a single inspector will cover both shifts by splitting the shift, or multiple inspectors are assigned to ensure adequate quality assurance checks. Such inspection is considered “extensive QA” but inspectors are performing quality assurance checks only and are not required to be at the shop continuously. In addition, Sample City considers field welding of the Class N piles and structural steel to require extensive inspection and are a specialty item. For this reason, Sample City’s Materials Department will perform field inspection on the Class N pile field welding operations.

Priority 1b: Priority 1 Items Requiring Source Inspection at Important Points Only

Priority 1b items that require inspection only during important points in the fabrication are: PTFE Spherical Bearings, Structural Steel Anchorages, and Light Poles. For PTFE Spherical Bearings, Sample City will send the MR to select and witness the proof testing of the Bearings once complete. The MR may choose to send an inspector during fabrication and/or painting of PTFE Bearings if not supplied by a company that is familiar with Caltrans Specifications or if other concerns arise. A final inspection and release of the product after all work and testing is complete will be performed at the source. For Structural Steel Anchorages, Sample City will select QA test samples for testing at the Sample City lab, return when such samples have passed, and “tag” the material to either the next process or jobsite. For Light Poles, Sample City will at a minimum send an inspector for QA final inspection of the product and review of QC records at the source with the exception of the Specialty Lighting identified in Table 10 and described in the footnotes of Table 10.

Priority 1c: Priority 1 Items that are Sampled at the Source

Priority 1c items on this project that require QA source sampling but not inspection on an extensive basis are High Strength fasteners and Couplers. Sample City will send a QA inspector to the facility to sample each lot of high strength fasteners in accordance with the following table:

Bolt Sampling Table

Lot Size	Total Sample Size per Lot	
	Source From: a) New Foreign and Domestic manufacturers, and b) Established foreign and domestic manufacturers with previous rejections	Source From: Established foreign and domestic manufacturers with past satisfactory quality.
	No. of Sample Required per Lot	No. of Samples Required per Lot
2 to 15	3	1
16 to 25	4	1
26 to 50	5	1
51 to 90	7	3
91-150	8	3
151 to 280	9	3
281 to 3,200	12	5
3,201 to 10,000	12	7
10,001 to 35,000	16	8
35,001 to 150,000	16	8
150,001 to 500,000	16	10
500,001+	20	12

- Lot size shall be defined as the total number of fasteners from one production or assembly lot or shipment which is available for sampling and inspection at a particular time.
- One sample is defined as one of each of the fastener components (i.e. bolt, nut, washer, DTI, cap screw, etc.) that make up a fastener assembly

Couplers: For couplers that are assembled in a shop, the QA inspector will witness the coupling and verify that QA and QC samples are sent to the respective labs. For couplers assembled in the field, no source inspection will be required as the field inspection staff will be responsible for QA and QC sampling and testing.

- Priority 2: “Priority 2” materials are items with moderate safety concern or moderate maintenance cost. Normally part time QA inspection (Spot checks of in-process work at a single or multiple times during the fabrication time period) is conducted at the discretion of the MR. A tag is issued at completion of work along with a final inspection report.
- Priority 3: “Priority 3” materials are items with low safety concern or low maintenance cost and normally require only field inspection and a Certificate of Compliance. Periodic source inspection may be made at the discretion of the MR.

Table 10: Items to be used in the Caltrans Right-Of-Way

Bid #	Bid Item	Quantity	Material	Inspection Location	Priority
52	Cap Inlet	LS	All Components	Field/COC	3
53	Irrigation System	LS	All Components	Field/COC	3
54	8” Welded Steel Pipe Conduit	1,200 LF	All Components	Field/COC	3
55	Aggregate Base*	20,400 CY	All Components	Field/COC	3
56	Class 3 Aggregate Base*	16,400 CY	All Components	Field/COC	3
57	Lean Concrete Base Rapid Setting	1,260 CY	All Components	Field/COC	3
58	Concrete Pavement (Rapid Strength Concrete)	15,400 CY	All Components	Field/COC	3
59	16” CIDH Piling (Concrete)	7,725 LF	Couplers	Source/Field	1c
			Other Components	Field/COC	3
60	PTFE Spherical Bearing	24 EA	PTFE Bearing Components	Source	1b
			Painting of Bearings	Source	1b
61	Structural Concrete Bridge	10,125 CY	Concrete*	Field/COC	3*
			Steel reinforcement**	Field**	3**
			Couplers	Source/Field	1c
			Other Components	Field/COC	3
62	Structural Concrete, Soundwall	2,780 CY	Concrete	Field/COC	3
			Steel reinforcement**	Field**	3**
			Couplers	Source/Field	1c
			Other Components	Field/COC	3
63	Structural Concrete, Approach Slab	988 CY	Epoxy Coated Reinforcement	Source	2
			Concrete	Field/COC	3
			Other Components	Field/COC	3

Bid #	Bid Item	Quantity	Material	Inspection Location	Priority
64	Minor Concrete (Minor Structures)	190 CY	All Components	Field/COC	3
65	Minor Concrete (Pipe Encasement)	42 CY	All Components	Field/COC	3
66	Precast I-Girders	24 EA	Concrete*	Source/COC	3*
			Steel Strand System	Source	2
			Steel reinforcement**	Field**	3**
67	Drill and Bond Dowel	720 LF	All Components	Field/COC	3
69	Soundwall (Masonry Block)	26,400 SQFT	Masonry Block – High Strength	Source	2
			Other Components	Field/COC	3
70	Joint Seal (MR 1")	288 LF	Sealant	Source	2
			Other Components	Field/COC	3
71	Steel Pipe Piles – Class N	1,120 LF	All Components	Source	1a
72	Bar Reinforcing Steel (Bridge)	3,159,500 LB	All Components**	Field	3**
73	Bar Reinforcing Steel (Soundwall)	316,970 LB	All Components**	Field	3**
74	Misc. Bridge Metal	42,700 LB	Brackets for monitoring system	Field/COC	3
			Anchorage System (Source Fabricated Components)	Source	1c
			High Strength Fastener	Source	1c
			Other misc. bridge metal Fabrication - Welding	Source	2
			Other Fabrication - Painting	Source	2
			Other Fabrication – Galvanizing	Source	2
75	Furnish Sign Structure (Truss)	36,850 LB	Truss Fabrication	Source	1a
			Anchorage System (Source Fabricated Components)	Source	1c
			High Strength Fasteners	Source	1c
			Galvanizing	Source	2

Bid #	Bid Item	Quantity	Material	Inspection Location	Priority
			Field Splice/Bolts	Field/COC	3
			Other Components	Field/COC	3
76	Furnish Formed Panel Sign (Overhead)	350 SQFT	Panel	Source	2
			Other Components	Field/COC	3
77	Furnish Single Sheet Aluminum Sign (0.08" Unframed)	370 SQFT	All Components	Field/COC	3
78	Furnish Single Sheet Aluminum Sign (0.08" Framed)	330 SQFT	All Components	Field/COC	3
79	"Welcome to Sample City" Illuminated Sign	1EA	Sign	Field/COC	3
			Lighting***	Field/COC	3***
80	Precast Prestressed Concrete Piles	6,812 LF	All Components	Source	1a
81	Precast Drainage Inlets	4 EA	All Components	Field/COC	3
82	18" Reinforced Concrete Pipe	500 LF	All Components	Field/COC	3
83	72" Reinforced Concrete Pipe	372 LF	All Components	Source	2
84	Miscellaneous Iron and Steel	19,544 LB	Source Fabrication	Source	2
			Anchorage Assembly	Source	2
			Other Components	Field/COC	3
85	Transition Railing (Type WB)	1 EA	All Components	Field/COC	3
86	MBGR Connection to Bridge Railing	4 EA	All Components	Field/COC	3
87	Decorative Steel Fence	110 LF	All Components	Field/COC	3
88	Concrete Barrier (Type 60W)	520 LF	All Components	Field/COC	3
89	Concrete Barrier (Type 60R)	2,930 LF	All Components	Field/COC	3
90	Concrete Barrier (Type 736M)	420 LF	All Components	Field/COC	3
91	Concrete Barrier (Type 736V)	380 LF	All Components	Field/COC	3
92	4" Thermoplastic Traffic Stripe	32,600 LF	Paint	CHEM/LAB	3
			Other Components	Field/COC	3
93	8" Thermoplastic Traffic Stripe	3,780 LF	Paint	CHEM/LAB	3
			Other Components	Field/COC	3

Bid #	Bid Item	Quantity	Material	Inspection Location	Priority
94	Thermoplastic Pavement Marking	6,510 SQFT	Adhesive	CHEM/LAB	3
			Other Components	Field/COC	3
95	4" Thermoplastic Traffic Stripe (Broken)	25,600 LF	Paint	CHEM/LAB	3
			Other Components	Field/COC	3
96	Pavement Marker (Non-Reflective)	6,090 EA	Adhesive	CHEM/LAB	3
			Other Components	Field/COC	3
97	Pavement Marker (Retro-reflective)	3,110 EA	Adhesive	CHEM/LAB	3
			Other Components	Field/COC	3
98	Maintaining Existing Traffic Management System	LS	Electrical Components***	Field/COC	3***
			Other Components	Field/COC	3
99	Lighting (Temporary)	LS	Electrical Components***	Field/COC	3***
			Other Components	Field/COC	3
100	Modify Communication System	LS	Electrical Components***	Field/COC	3***
			Other Components	Field/COC	3
101	Modify Lighting and Sign Illumination	LS	Electrical Components***	Field/COC	3***
			Poles	Source	1b
			Anchor Rods	Source	1b
			Field Connection/Bolts (HS)	Source	1c
			Other Components	Field/COC	3
102	Custom Decorative Lighting	LS	Electrical Components***	Field/COC	3***
			Decorative Poles****	WARRANTY****	WARRANTY
			Other components****	WARRANTY****	WARRANTY

Table 10 Notes:

*For Priority 1 and Priority 2 precast bid items with concrete, supplementary cementitious material and aggregates will be sampled and tested by the Sample City Material Testing Division prior to the start of work by those facilities. Field concrete operations including any sampling will be handled in accordance with the field Quality Management Plan and are not covered by this SIQMP.

**Sample City will make one trip to the Steel reinforcement Supplier(s) to verify the QC process used. This single visit may serve as the QA check for all the steel reinforcement on the project from a given facility at the discretion of the MR.

***All electrical components for this job are State Furnished. As such, Sample City will perform a final visual inspection when they arrive and file any associated paperwork/COC's but will not source inspect electrical components. Should a special order item be needed, Sample City will consult the SIQMP outline addendum maintained by the Caltrans Electrical Department and source inspect/test the items as appropriate.

**** The Decorative Poles will be a sole source material to ensure that they match the other lighting within Downtown Sample City. These items are under warranty and will be maintained by Sample City as stipulated in the cooperative agreement. As a result, these light poles will not be fabricated at a Caltrans Audited Facility. In addition, due to the warranty, Sample City does not intend to perform any source inspection of these items. Section 2.2.5 contains additional information on this lighting system.

2.2.5. Special Materials – Proprietary Systems

Proprietary “Decorativelight” brand lighting has been sole sourced to match other Sample City lighting near the project location. This lighting is allowed per Contract Special Provisions:

- Decorativelight- Custom decorative lights www.decorativelight.com

These lights will be maintained by Sample City as a condition of the Cooperative Agreement

2.2.6. Project Materials Distinction

Table 11 shows Items that are partially out of Caltrans Right-of-Way.

For consistency, Sample City intends to apply the same Priority system and inspection process to all materials for this project, whether in Caltrans ROW or not.

Table 11: Items that are partially out of Caltrans Right-of-Way

Bid #	Bid Item	Material
53	Irrigation System	All Components
69	Soundwall (Masonry Block)	Masonry Block – High Strength
		Other Components
73	Bar Reinforcing Steel (Soundwall)	All Components
84	Miscellaneous Iron and Steel	Source Fabrication
		Anchorage (Source)
		Other Components
92	4” Thermoplastic Traffic Stripe	Paint

Bid #	Bid Item	Material
		Other Components
93	8" Thermoplastic Traffic Stripe	Paint
		Other Components
94	Thermoplastic Pavement Marking	Adhesive
		Other Components
95	4" Thermoplastic Traffic Stripe (Broken)	Paint
		Other Components
96	Pavement Marker (Non-Reflective)	Adhesive
		Other Components
97	Pavement Marker (Retro-reflective)	Adhesive
		Other Components
101	Modify Lighting and Sign Illumination	Electrical Components
		Poles
		Anchor Rods
		Field Connection/Bolts
		Other Components
102	Decorative Light Poles*	All Components*

* These light poles are a specialized product with a warranty as indicated in section 2.2.5, and as such, they will be maintained by Sample City inside and outside of the Caltrans ROW and will not be subject to audit or source inspection.

2.2.7. Project Materials Management

Sample City will utilize the same nomenclature as Caltrans for material management with slight exception as noted here; The RE will ensure that the Contractor will submit the SC-3101, "Notice of Materials to be Used" form for all the materials to be incorporated in the project. This form lists vendors and fabricators providing materials for the project. Upon receipt of each SC-3101 form, the MR will determine, based on Sample City's Prioritization procedure described in Section 2.2.1 of this document, whether the material listed requires inspection at: 1) the source by Sample City's Materials Division or 2) field by Construction.

- 1. Source Inspection:** If material listed on the SC-3101 form requires Source Inspection, the MR or responsible Sample City Material Division will send a Sample City Form-608 "Notice of Materials to be Furnished" to the vendor or fabricator, Prime Contractor and Resident Engineer. This document informs all parties that Sample City will perform inspection and release of material prior to being sent to the jobsite. A "Sample City Form-38", Inspection Request Form, is included with the Sample City Form 608 sent to the vendor or fabricator. The vendor or fabricator then faxes the "Sample City Form-38" back to the Sample City Materials Division to request an inspection date.

When materials are issued a "Sample City Form-608", the Sample City Materials Division will dispatch inspectors to carry out inspection activities as outlined in this SIQMP.

- 2. Field Inspection:** If the material listed on the SC-3101 form does not require Source Inspection, (Priority 3) the inspection is assigned to the Resident Engineer at the job site through the use of Sample City Form- 28, "Notice of Materials to be inspected." The Prime Contractor and vendors are also sent a copy of the "Sample City Form-28" in order to inform them that Source Inspection is not required prior to shipment to the jobsite.

2.2.8. Documentation

Sample City Inspectors will document the daily QA Inspection activity for the project. Sample QA inspection forms are included in the Appendix E.

- Material Management
- Inspection Request
- Material Release
- Source Inspection Reports
- Non-Conformance Reports
- Review Forms

2.2.8.1. Included are the Following Sample Forms:

- i. Note, the following forms required of the SIQMP are discussed above in 2.2.8, and are included in the appendix section. Several forms are repeated in more than one category below as they pertain to multiple functions. Forms required for inspections are:

- Source Inspection/Material Verification
 - Sample City Form-29 Report of Inspection of Material (Sample City Orange Tag)
 - Sample City Form-6011 Component Material Inspection Report (Sample City Green Tag)
 - Sample City Form-6012 Stock Material Verification
 - Sample City Form-6014 Report of Verification of Material (Sample City Blue Tag)
 - Sample City Form-6034 Source Inspections Report
 - Sample City Form-6042 Paint Inspection Report
- Sample of Materials for Testing
 - Sample City Form-0101 Sample Identification Card
- Precast Reports

- Sample City Form-6033 Precast Concrete Inspection Form
- Sample City Form - Review of Precast Concrete Quality Control Plan
- Welding Reports
 - Sample City Form-23 Review of Contractor's Welding Quality Control Plan
 - Sample City Form-6031 Welding Inspection Reports
 - Sample City Form-6032 Welding Witness Report
- Painting Reports
 - Sample City Form-22 Review of Paint Quality Work Plan
 - Sample City Form-6042 Paint Inspection Report
- Non-Destructive Testing Reports
 - Sample City Form-6027 Ultrasonic Testing (NDT)
 - Sample City Form-6028 Magnetic Particle Testing (NDT)
- Issue/Non-Conformance and Non-Conformance Resolution Reports
 - Sample City Form-15 Non-Conformance Report
 - Sample City Form-16 Non-Conformance Resolution
- Other
 - SC-3101 Notice of Materials to be Used
 - Sample City Form-28 Notice of Materials to be Inspected
 - Sample City Form-608 Notice of Materials to be Furnished
 - Sample City Form-38 Inspection Request Form
- ii. Note: Compliance certification forms and/or material verification forms required of the SIQMP are included are included in the appendix.
 - Sample City Form-29 Report of Inspection of Material (Sample City Orange Tag)
 - Sample City Form-6011 Component Material Inspection Report (Sample City Green Tag)
 - Sample City Form-6013 Material Suitability Report (Accompanies a Sample City Blue Tag and Sample City Form 6014)
 - Sample City Form-6014 Report of Verification of Material (Sample City Blue Tag)

2.2.8.2. Review and Distribution of the QA Inspection Reports

Upon completion of each report, the inspector will send the inspection report(s) to a Reviewer. The Reviewer will transmit the reviewed inspection reports to the Sample City RE/SR. These reports will be filed and available to the Caltrans OMR upon request or during an audit.

2.2.8.3. Material Acceptance

Materials Acceptance depends upon “materials releases” from the point of source inspection, obtaining proper certifications from the Contractor and performing a field inspection for items to be inspected in the field, and following this Source Inspection Quality Management Plan.

The following generally describes the material release process for items that are source inspected: If the material conforms to the Project Specifications and is intended to be shipped to the jobsite, the QA Inspector will release the material with a “Sample City Orange Tag” and will issue a “Sample City Form-29” Report of Inspection of Materials. If the material has been inspected at one fabricator and is intended to go to another fabricator for further fabrication, the QA Inspector will release the material with a “Sample City Green Tag” and will issue a Sample City Form-6011 Component Material Inspection Report Form. If the material complies with other documents such as an RFI, Sample City memorandum, or other forms of communications, and the Sample City MR and Sample City RE agree that the material is fit for purpose, then the QA Inspector will release the material with a “Sample City Blue Tag” and will issue a Sample City Form-6014 “Report of Verification of Material Form”. See Section 2.5.2.4.1 of this document for details about Sample City Blue Tag. Sample City will obtain concurrence from the Oversight RE for such changes as required per the responsibilities outlined in the cooperative agreement.

For items that are to be field inspected, the RE will obtain a Certificate of Compliance from the Contractor and have a field inspection conducted by a field Engineer or Inspector from Sample City.

At project closeout, Sample City’s Resident Engineer will be responsible for performing final materials acceptance and certify that the approved Quality Management Program (QMP) procedures were followed during the life of the project with a final acceptance letter provided to Sample City.

2.2.8.4. Inspection Report Filing

All Sample City Materials Division Inspection Report Forms and documents will be distributed to the Sample City RE/SR. The reports will be available to the OMR at any time. Storage of these hard copy reports will be kept at the Sample City Material Division at the following address:

Sample City Materials Division
1 Main Street,
Sample City, CA 90000
Phone: (111) 111-1111
FAX (222) 222-2222

2.3. Verification Lab Testing and Documentation

2.3.1. Qualification of the Verification Testing Laboratory

Steel Testing will be performed by Sampletest, Inc. This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) for rubber products testing, steel/iron testing, fastener testing, prestressing steel strand, hardness, spliced reinforcing steel, epoxy coating, wire mesh, metallography, carbon steel chain, wire rope, and dimensional testing.

Additional tests that are required by the project specifications, such as concrete material testing will be performed by one of the three AASHTO Accreditation Program (AAP) certified laboratories that are on contract: SuperSamplelab, Inc., Concrete Lab Associates, or Concrete Testing Company.

2.3.2. List of Verification Tests and Frequencies

Table 12 presents a list of Source Inspection materials verification testing and frequencies that will be implemented in this project, where applicable.

Table 10: List of Source Inspection Material Verification Tests and Frequencies

Bid #	Bid Item	Material	Amount/Samples of material to be tested	Tests performed
60	PTFE Bearing	PTFE Spherical Bearing	Lot of bearings and number of samples defined in the special provisions	ASTM D4014, ASTM D4894, ASTM D4895, ASTM A709, ASTM A240, Type 304, A1011GR.36, AWS D1.6 , AWS D1.1
61	Structural Concrete Bridge	Concrete	Review of QC test data only	ASTM C 150, ASTM C 494, ASTM C 260, ASTM C 618
		Steel reinforcement	1 sample from rebar supplier at start of production	ASTM A706, ASTM A615
		Elastomeric Bearing	One per lot or batch (whichever is greater)	ASTM D4014, CT 663
		Steel reinforcement Welding	Min 25% of production lot	AWS D1.4
63	Structural Concrete, Approach Slab	Epoxy Coating	1 QA sample selected from	ASTM A775, ASTM A884, ASTM A934

Bid #	Bid Item	Material	Amount/Samples of material to be tested	Tests performed
			each epoxy coater as a check sample	
66	Precast Concrete Girders	Strand	1 QA sample per 2 strand packs	ASTM A421, ASTM A916 , ASTM A722
		Steel reinforcement	1 sample from rebar supplier at start of production	ASTM A706,ASTM A615
		Concrete	Per table 10 footnote, 1 sample for aggregate and SCM	ASTM C 150, ASTM C 494, ASTM C 260, ASTM C 618
69	Soundwall (Masonry Block)	Masonry Block High Strength	1 per 10,000 blocks	UBC 2404, ASTM C140
71	Steel Pipe Piles Class N	Welding	Per AWS D1.1 and Project Specials – 25% QA UT	Priority 1a item. Frequency of inspection will be per 2.2.4.1 and will include UT testing and visual per special provisions.
74	Structural Steel	High Strength Fasteners, Anchorage	See Table in 2.2.4.1 for bolt sampling frequency	ASTM A325, ANSI/ASME B1.2, ASTM A370, ASTM B499, ASTM E8, ASTM E10, ASTM E18, ASTM F606, ASTM F1554/A307, ASTM A751
		Welding	QA to perform random checks of field welding operations	Appropriate NDT verification UT, VT, MT AWS D1.5per project specials.
		Galvanizing	No QA source samples for Galvanizing	Verify QC records for ASTM A123
75	Furnish Sign Structure (Truss)	Anchorage	Sampling per section 2.2.4.1	ASTM F1554/A307, ASTM A370, ASTM F606, ASTM A751

Bid #	Bid Item	Material	Amount/Samples of material to be tested	Tests performed
		Welding	See 2.2.4.1 and table 10	Appropriate NDT verification UT, VT, MT per project specials.
		Galvanizing	No QA source samples for Galvanizing	ASTM A123
76	Furnish Formed Panel Sign	Sign Panel	Priority 2 item. Inspection per 2.2.4.1. No physical samples except verification of QC records.	ASTM B209, 5052-H32, ASTM B449, ASTM D4956
80	Precast Piles	Strand	1 QA sample per 2 strand packs	ASTM A421, ASTM A916, ASTM A722
		Steel reinforcement	1 sample from rebar supplier at start of production	ASTM A706, ASTM A615
		Concrete	Per table 10 footnote, 1 sample for aggregate and SCM	ASTM C 150, ASTM C 494, ASTM C 260, ASTM C 618
84	Miscellaneous Iron and Steel	Anchorage	Sampling per section 2.2.4.1	ASTM F1554/A307, ASTM A370, ASTM F606, ASTM A751
		Source Welding	Priority 2 item. Inspection per 2.2.4.1	Appropriate NDT verification UT, VT, MT per Project Special.
		Galvanizing	No QA source samples for Galvanizing	ASTM A123
101	Modify Lighting and Sign Illumination	Poles	Priority 2b item. Inspection per 2.2.4.1	Appropriate NDT verification UT, VT, MT per Project Special.
		Anchorage	Sampling per section 2.2.4.1	ASTM F1554/A307, ASTM A370, ASTM F606, ASTM A751

Bid #	Bid Item	Material	Amount/Samples of material to be tested	Tests performed
		Galvanizing	No QA source samples for Galvanizing	ASTM A123

2.3.3. Verification Material Filing System

The verification material filing system follow the procedures described in Sections 2.2.8.2 and 2.2.8.4 of this document.

2.3.4. Example Forms for Sampling and Testing

A Sample Identification Form (Sample City Form-0101 Form) is used for samples collected at the source. Test reports are developed for all samples sent for testing at the testing labs. A tracking number is assigned and a receiving date is recorded when the samples arrive at the testing lab. The format for the tracking number is SM 00-0XXX. This is broken down as: Structural Materials, the last two digits of the year, and the number of the sample. Testing results are E-mailed or faxed to the name listed on the Sample City Form-0101 for the material.

2.3.5. Verification/QC Testing Laboratory Conflict of Interests

Sample City’s verification and testing facilities are independent testing laboratories that are owned and operated by Sample City which only performs verification testing.

2.4. Contractor Quality Control Plans

The Sample City Materials Division will receive and review Quality Control Plans as required by the specifications. Plans are required for the following bid items:

Welding Quality Control Plans:

Bid Item 60, PTFE Spherical Bearings Bid Item 71, Steel Pipe Piles (Class N)* Bid Item 74, Miscellaneous Bridge Metal

Precast Quality Control Plan (PCQCP):

Bid Item 66, Precast I Girders Bid Item 80, Precast Piles

Paint Quality Work Plan (PQWP):

Bid Item 60, PTFE Spherical Bearings

Sign Quality Control Plan:

Bid Item 76, Formed Sign Panel

* Requires QC personnel performing UT to have passed the Caltrans Transportation Laboratories written and practical examinations for UT. Sample City will verify that QC personnel are meeting this requirement.

2.4.1. Review of QC Plans

After receiving each QC Plan from the Contractor, Sample City's RE transmits the QC plan to Sample City's Materials Division for review. Sample City's Materials Division has ten days to review each package, and three days for each subsequent addendum. Upon completion of the review, Sample City's Materials Division provides the RE with its recommendations. Finally, the RE's office will write a letter to the Contractor based on the Sample City Materials Division's recommendations.

For bid items specified under the "Welding Quality Control" subsection of the specifications, it is required that a Welding Quality Control Plan (WQCP) be submitted to the Sample City Materials Division prior to commencing any welding. The WQCP serves as the Guiding document for the QA and QC inspectors at the fabrication facilities with regard to which welding procedures, electrodes, and welders are approved for use.

A Precast Quality Control Plan (PCQCP) is a required document for bid items specified under "Precast Quality Control" of the specifications. These plans must be submitted and approved by Sample City's Materials Division prior to commencing any precasting

Paint Quality Work plans will be required as noted under section 4.1 and will serve as the guiding document for painting operations. These plans must be submitted and approved by Sample City's Materials Division prior to commencing any painting.

Sign Quality Control plans are required for laminated and/or formed sign panels. These quality plans will be reviewed to ensure that the fabricator has a method of inspecting signs for compliance with the specifications.

2.4.2. Pre-Operation Meetings

Prior to submitting a Quality Control Plan (WQCP, PCQCP, or PQWP), a meeting between the MR, Resident Engineer, the Contractor's QCM, and a representative from each entity performing welding and inspection operations for this project, will be held to discuss the requirements. At the option of the RE, the meeting may be held by teleconference, in person, or by video conference.

The MR will prepare a meeting handout and lead the meeting.

The following is a summary of topics that are generally included in the agenda for discussion:

- Review Bid Items and the scope of work
- Discuss inspection coordination and schedule
- Define roles and responsibilities
- Review contract requirements related to the welding, pre-casting, or painting work
- Requirements for the WQCP, PCQCP, or PQWP
- Reports and Release Documents
- Final comments and concerns

The MR will file the minutes per Section 2.2.8.4 of this document and distribute it to the parties that attended the meeting. A copy will be available to the OMR upon request or audit.

2.4.2.1. Shop drawings, CCOs, and RFIs

For items in which shop drawings are required, the Sample City RE will review and accept the shop drawings. A copy of the accepted shop drawings will be provided to the Sample City Materials Division personnel prior to the start of fabrication. At a minimum, the accepted shop drawings are required prior to fabrication for the following items:

- Bid Item 60 - PTFE Spherical Bearings
- Bid Item 66 - Concrete I Girders
- Bid Item 71- Steel Pipe Piling
- Bid Item 74 - Misc. Bridge Metal
- Bid Item 75 - Furnish Sign Structure
- Bid Item 80 - Pre-Cast Concrete Piles
- Bid Item 101 - Modify Lighting and Sign Illumination

2.5. Issue Resolution

Issues that arise during the QA inspection will be handled at the lowest possible level and elevated according to the organizational chart and timelines found in the Project Cooperative Agreement. Formal documentation for issue resolution including Requests for Information (RFIs) and Non-Conformance Reports (NCRs) will be handled through the following procedures:

2.5.1. CCOs, RFIs, and NCRs

RFIs are formal requests for additional information or clarification regarding the design and construction of the project which may be initiated by anyone associated with the project. An RFI is not a request to change the design; it is only to clarify features or the intentions for the existing design. A response to an RFI that changes the design may require the issuance of a Contract Change Order (CCO). The MR must be made aware of these items in order to properly manage the Materials related items on the project. The MR is also responsible for distributing such information to QA (Sample City) source inspectors.

The MR needs to be informed of the approved CCO, RFI, or other revisions to the project plans and specifications that may affect Source Inspection Procedures. As such, for Materials related CCO's, RFI's, and changes to the plans or specifications, the MR will be copied on correspondence and in attendance at meetings related to materials. The MR will be copied on any materials related items at the same time or prior to issuance to the Contractor.

Nonconforming conditions identified on material, equipment, or product of in-process or completed work will be tracked on a Non-Conformance Report. The tracking of NCRs will ensure that nonconforming conditions are resolved and will prevent the incorporation of non-conforming items into the completed project. This control provides for the identification, documentation, segregation (when practical), evaluation, and disposition of the condition, notification to those concerned and who is accountable for each.

2.5.2. Instances Requiring NCRs Materials:

2.5.2.1. NCR on Product

Verification Inspectors will write an NCR on the product under the following circumstances:

- A QA inspector identifies materials that do not meet contract requirements, and the Contractor's quality control (QC) personnel have already accepted the material.
- A QA Inspector will write an NCR for the material if the contractor cannot correct the deficiency within a work shift.
 - Note: QA Inspector will typically not write an NCR on a material that will be corrected within a work shift and the non-conformance is not repeated.
- QA Inspection reveals obvious attempts to hide processes or products that do not meet the contract requirements.
- Contractor ships material without a Field/COC release tag.

QA Inspectors will typically not write an NCR on Material under the following circumstances:

- Material that has not been inspected and accepted by the contractor's QC personnel.
- Material that can be repaired or fixed within a work shift of when the deficiency is discovered (an NCR may be required on the QC, see procedures outline above).
- Material that has been identified by QC that does not meet the contract requirements and can be repaired during production. (This conversation and action will be noted in the inspection report by the Verification inspector).
- Rejectable discontinuities found through nondestructive testing by QA Inspector in areas not tested by QC and repairs are commenced promptly (this conversation and action should be noted in the inspection report by the Verification Inspector).

2.5.2.2. NCR on QC Personnel/Process

Verification Inspectors will write an NCR on the Quality Control Personnel under the following circumstances:

- A QA Inspector identifies material that does not meet contract requirements, and the contractor's quality control (QC) personnel have already accepted the material.
- The third occurrence of the same deficiency regardless of the contractor's ability to correct the problem within a work shift (repeated from above).
 - Note that an NCR is not required on the first or second occurrences of a deficiency if QC personnel acknowledge the problem and ensure it is corrected within a work shift.
- Any non-conforming item that is a repeat of a previous item that resulted in an NCR.
- Any action taken by QC that is not in conformance with the contract requirements or any attempts to hide nonconforming items

2.5.2.3. NCR Procedure Details

QA Inspectors will ensure the following procedures are met when dealing with NCRs:

- The inspector locates a problem or deficiency and informs QC and/or a responsible representative from the contractor of the issue. QA Inspectors are not authorized to stop work. QA Inspectors will identify the Contractors areas of non-conformance; however, NCRs will not be provided to the contractor or quality control personnel by the QA inspector.
- The inspector contacts his Lead Inspector to discuss the issue:
 - Lead Inspector agrees that an NCR is required.
 - Lead Inspector informs the MR of the NCR who will notify the Implementing Agency RE.
 - The MR will forward the NCR to the RE

2.5.2.4. NCR Resolutions

Once non-conformances are identified and reported, the disposition and corrective action to bring the condition back into conformance will be evaluated by the Sample City RE. Potential resolutions to non-conformances include:

- Rework to meet the originally specified requirements
- Repair to achieve fitness for use
- Accept the conditions as is (require a CCO)
- Reject the condition by removing it and replacing it with material meeting the specified requirements
- Fit for purpose evaluation; blue-tag as described in 2.5.4.1 below.

An inspector or MR will complete a Sample City Form-16 when the issue is resolved based on the list above.

2.5.2.4.1. Fit-For-Purpose Evaluation (Blue Tag Release Procedure)

The alternative fit-for-purpose evaluation and blue tag release process will allow the QA Inspectors to release the material when the Sample City RE determines that the material is suitable for its intended purpose on the project but does not meet all of the contract requirements. The fit-for-purpose may be initiated by NCR, RFI, submittals, shop drawings, Contractor requests, observations, meetings, or other forms of revisions.

For fit-for-purpose releases, the Sample City RE will provide written notification to the MR. The MR will then notify the QA Inspector. In such cases, the QA Inspector will release the material with a blue tag and will issue a "Sample City Form-6014" Report of Verification of Material form. The Sample City Form 6014 will contain the MR's written recommendation as a supporting document.

2.5.3. Procedures for Handling Disagreements

Every effort will be made to resolve disputes between Owner's and Contractor's inspection staff at the lowest level, and will be elevated according to the organization chart and timelines found in the project charter established during the initial partnering meeting.

3. Reporting Verification Inspection Status to Implementing Agency, Sample City

3.1. Monthly Summary Report

On the first day of each month Sample City's MR will prepare a summary report that describes the Materials Source Inspection activities performed for the prior period. At minimum, the following topics will be discussed in the report:

- A Statement verifying continued compliance with the SIQMP signed by the Sample City RE.
- A response to any Caltrans audit findings.
- A summary of the verification source inspection work completed over the reporting period and summary of work anticipated in the next period.
- A summary of NCR's issued and the status of those outstanding.
- A summary of any changes to the plans or specifications.
- Summary of EPDs received and still pending

The report will be reviewed and verified by the Sample City RE before distribution to the Caltrans OMR.

Sample City understands that individual inspection reports are not required to be submitted with the monthly summary report. Sample City will file the inspection and other reports per Section 2.2.8.4 of this document and will make them available for audits.

4. Final Acceptance Letter

Upon completion of all work, the Sample City RE will provide the Caltrans Oversight RE and OMR with a stamped letter stating that these approved SIQMP procedures were followed during the life of the project.

17.6 Appendix 6: Risk Assessment Form deviating from high risk item

California Department of Transportation

DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION
QUALITY ASSURANCE AND SOURCE INSPECTION
TRANSPORTATION LABORATORY – MS-5
5900 FOLSOM BOULEVARD, ROOM 101
SACRAMENTO, CA 95819-4612
www.dot.ca.gov



Request for Deviation from Caltrans Inspection Level

This form is required when an implementing agency deviates from the standard inspection level for a material outlined in Section 5 of the Source Inspection Guidelines for Local Agencies (SIGLA). This form must be used to document the risk assessment that the implementing agency has developed to provide technical reasoning to deviate from the Caltrans standard inspection level. It must be signed and stamped by a civil engineer registered in the State of California who is in a leadership role in this project.

Caltrans project number:

Detailed description of material deviating from Caltrans standard inspection level:

Material Fabricator:

Description of how "Implementing Agency" is deviating from the Caltrans Standard Inspection Level:

Below is "Implementing Agency's" explanation of risk assessment and justification for deviating from Caltrans risk assessment standards.

- Number of NCRs "Implementing Agency" has issued to the fabricator in the past 12 months:
- Risk assessment of material and workmanship as described in appendix XX: "Detailed justification"
- Project assessment as described in appendix XX: "Detailed justification"
- Risk Factor score:

"Implementing Agency" provides the follow additional comments/justification for this deviation:

The "Implementing Agency" understands that this reduction in source inspection requirements deviates from Caltrans standard operating procedures for source inspection outlined in the SIGLA. "Implementing Agency" has performed an in-depth risk assessment as described above as part of our materials management system. "Implementing Agency" has determined that this deviation in source inspection

Request for Deviation from Caltrans Inspection Level

<Date>

Page 2

requirements will not contribute to an increased factor of safety for the public or an increased maintenance cost.

<<Implementing agency name & title>>

(Affix Stamp Here)

This form is subject to approval by Caltrans METS and must be submitted through the Oversight Resident Engineer. Allow 15 days for review. Caltrans METS decision (circle):
Approve / Disapprove

Caltrans METS reviewer: _____

17.7 Appendix 7: OQASI Forms

OQASI FORMS

Form	Name
CEM-3101	Notice of Materials to be Used
TL-15	Quality Assurance Nonconformance Report
TL-16	Quality Assurance Nonconformance Resolution
TL-20	Review of Contractor's Submittal
TL-21	Review of Welder Qualifications
TL-22	Review of Contractor's Paint QWP
TL-23	Review of Contractor's Welding QCP
TL-24	Welding QCP NCR
TL-25	Review of Contractor's Welding FCP
TL-26	Welding FCP NCR
TL-27	Review of Contractor's WPS/PQR
TL-28	Notice of Materials to be Inspected
TL-29	Report of Inspection of Materials
TL-38	Inspection Request
TL-608	Notice of Materials to be Furnished
TL-649	Verification of Materials on Hand
TL-6011	Notice of Shipment of Material
TL-6012	Report of Inspection of Stock Material
TL-6014	Material Suitability Report
TL-6031	Welding Inspection Report
TL-6032	Welding Fitness Report
TL-6033	Concrete Inspection Report
TL-6034	Source Inspection Report
TL-6035	QA Lead Verification Report
TL-6037	Weekly Fabrication Report
TL-6040	Document Distribution
TL-6041	Report of Drawing Review
TL-6042	Coating Inspection Report

Note: OQASI Forms are included in this Manual only as guidance for Local Agencies, Caltrans and OQASI logos should be replaced with Local Agency logos and Local Agency statement of work language

CEM-3101 NOTICE OF MATERIALS TO BE USED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NOTICE OF MATERIALS TO BE USED
 CEM-3101 (REV 09/2019)

Lock Data on Form

Resident Engineer _____ Date _____

Materials required for use under contract number (1) _____

District _____ County _____ Route _____ Post Mile _____

will be obtained from the following sources:

Contract Bid Item Number (2)	Item Code (3)	Contract Item Description (4)	Item Component (5)	Item Component Quantity (8)	Manufacturer/Provider Name and Address (7)	Manufacturer/Provider Email Address (7)

It is requested that the contractor arrange for sampling, testing, and inspection of materials prior to delivery in accordance with Section 6 of the Standard Specifications. It is understood that source inspection does not relieve the prime contractor of the full responsibility for incorporating into the work, materials that comply in all respects with the contract plans and specifications, nor does it preclude the subsequent rejection of materials found to be unsuitable.

(8) Copies: Materials Administrator, Mail Station #5
 Materials Engineering & Testing Services
 5900 Folsom Blvd., Sacramento, CA 95819
MaterialsAdministratorMETS@dot.ca.gov
 Fax: (916) 227-7084
 Construction Senior Engineer
 Contractor File
 District Construction Office

Prime Contractor _____

Address _____

Business Phone _____ Business Fax _____ Email Address _____

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For alternate format information, contact the Forms Management Unit at (916) 445-1233, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.



TL-15 QUALITY ASSURANCE NONCONFORMANCE REPORT

STATE OF CALIFORNIA— CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract # : XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty _____ Rte _____ PM _____
 Vendor # vXXXX

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: <<Location Non-conformance was observed>> **JOBSITE NCR** **Date:** <<NCR Observed>>

Prime Contractor: <<Name of Prime Contractor>> **NCR #**<<NCR# Spreadsheet>>

Submitting Contractor: <<Name of Contractor with Non-Conformance>>

Type of problem:

Welding **Concrete** **Other**
Welding: **Curing:** **Procedural:** **Bridge No.** <Enter number or Unknown>
Joint fit-up: **Coating:** **Other:** **Component:** <i.e.Piece Number(s)>>
Procedural: **Procedural:** <<Description>>

Description of Non-Conformance: Press F1 for help, enter and/or paste text

Applicable reference: <<AWS D1.1, API 5L, ASTM, etc.>>

Who discovered the problem: <<Name and organization of individual discovering non-conformance>>

Name of individual from Contractor notified: <<Name and Position of Individual Notified>>

Time and method of notification: <<Date, Time, and Method (verbal, fax, etc.) Individual was Notified>>

Name of Caltrans Engineer notified: <<RE, Structure Rep, or Engineer Notified by MR - Contact MR>>

Time and method of notification: <<Date, Time, and Method (verbal, fax, etc.) of Notification - From MR>>

QC Inspector's Name: _____

Was the QC Inspector aware of problem: _____

Contractor's proposal to correct the problem:

Comments: This report is for the purpose of determining general conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of Lead Inspector>> Lead QA Reviewer



TL-16 QUALITY ASSURANCE NONCONFORMANCE RESOLUTION

STATE OF CALIFORNIA— CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract # : XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty [] Rte [] PM []
 Vendor # vXXX

QUALITY ASSURANCE - NONCONFORMANCE RESOLUTION

Location: <<Location Non-conformance was observed>> Date: <<Date NCR Resolved>>

Prime Contractor: <<Name of Prime Contractor>> NCR# << NC# (Spreadsheet)>>

Submitting Contractor: <<Name of Contractor with Non-Conformance>>

Type of problem:

Welding	<input type="checkbox"/>	Concrete	<input type="checkbox"/>	Other	<input type="checkbox"/>
Welding:	<input type="checkbox"/>	Curing:	<input type="checkbox"/>	Procedural:	<input type="checkbox"/>
Joint fit-up:	<input type="checkbox"/>	Coating:	<input type="checkbox"/>	Other:	<input type="checkbox"/> <<Other Problem Type>>
Procedural:	<input type="checkbox"/>	Procedural:	<input type="checkbox"/>		

Bridge No . <<Enter number or Unknown>> Component <<i.e. Piece Number(s)>>

Date nonconformance report was written: []

Description of Non-Conformance: []

Contractor's proposal to correct the problem: []

Corrective action taken: []

Did corrective action require Engineer's approval? Yes No

If so, name of the Engineer providing approval: <<Name of Engineer>> Date: []

Is Engineer's approval attached: Yes No <<Requires justification>>

Comments: This report is for the purpose of determining general conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of OQASI Reviewer>> <<Title (Branch Senior, MR, etc.)>>



TL-20 REVIEW OF CONTRACTOR'S SUBMITTAL

STATE OF CALIFORNIA — CALIFORNIA STATE TRANSPORTATION AGENCY
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION

Gavin Newsom, Governor



REVIEW OF CONTRACTOR'S SUBMITTAL

To: <<RE>>, Resident Engineer Review Date: <<Date>>
 From: <<MR, Phone Number>>, METS Representative Contract No.: <<XX-XXXXXX>>
 Date/Time Submittal Received: <<Date>>/ <<Military Time>> EFIS: <<XXXXXXXXXX>>
 The Contractor's Submittal #: << >> Rev. # << >> Vendor # v<<XXX>>

<input type="checkbox"/> substantially complies with specification requirements and approval is recommended			
<input type="checkbox"/> approval is recommended as noted, see comments below			
<input type="checkbox"/> needs to be resubmitted and unacceptable (reject) items corrected as per comments below			
Verbal Notification	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Date: << >> Time: <<Military Time>>
Name of individual from Contractor Notified: << >>			
This submittal is a:	<input type="checkbox"/> Welding Report	<input type="checkbox"/> Critical Weld Repair	
	<input type="checkbox"/> Request for Information	<input type="checkbox"/> Heat Straightening Request	
	<input type="checkbox"/> Fabrication Procedures	<input type="checkbox"/> Other: << >>	
Submitting Contractor: << >>			
ITEMS REVIEWED	COMPLIES		COMMENTS
1. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
2. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
3. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
4. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
5. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
6. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
7. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
8. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
9. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
10. << >>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<< >>
Add more items here.....# - Item - Complies (Yes or No)-Comments			

Remarks: << >>

OQASI Reviewer: <<Reviewer>>

Date: <<Date>>



TL-21 REVIEW OF WELDER QUALIFICATIONS

STATE OF CALIFORNIA — CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<< Select Branch >>
 << Select Address >>
 << Select City, State, Zip >>
 << Select Phone # >>
 << Select Fax # >>

Contract #:
 EFIS:
 City Rte PM
 Vendor # v:

REVIEW OF WELDER QUALIFICATIONS

To: <<RE Name>> Date Received: <<Date Received>>
 Tel. No.: <<RE Phone Number>> Fax No: <<RE Fax Number>>
 Welding Firm: Contract No:
 Materials to be Welded: Struct. Steel Misc. Rebar Col. Casings
 H-Piles Pipe Piles Sign Structures/Poles
 Governing AWS Code: D1.1 (yr) D1.4 (yr) D1.5 (yr) D1.6 (yr)
 Base Metal: <<Base Metal>> Grade: <<Grade of Metal>> Thickness Qualified: <<3/4" or Unlimited>>

The following welder qualification test records submitted for use on this contract have been reviewed by this office based on governing AWS Code and contract specifications.

Welder's Name	Welder ID	Date Tested	Weld Process	Weld Position	Complies
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Welders shall be individually qualified to base materials not listed as approved in the applicable code to which the welder is qualifying.

QUALIFICATION DATE: Special Provision Sec. 8-3, "Welding Quality Control" limits period of effectiveness to 3 years. Otherwise, per AWS the welder's qualification shall be considered as remaining indefinitely unless: 1) the welder is not engaged in a given process for which the welder is qualified or a period exceeding 6 months or 2) there is some specific reason to question the welder's ability

WELDING PROCESSES: SMAW (Shielded Metal Arc Welding), FCAW-S (Flux Cored Arc Welding, Self-Shielded), FCAW-G (Flux Cored Arc Welding Gas Shielded), SAW (Submerged Arc Welding), and GMAW (Gas Metal Arc Welding).

WELDING POSITIONS: 1G = Flat Groove, 2G = Horizontal Groove, 3G = Vertical Groove, 4G = Overhead Groove (2G qualifies for 1G, 3G qualifies for 1G & 2G, 4G qualifies for 1G & 2G only). Groove weld qualification also qualifies welder for fillet welding in same position. 1F = Flat Fillet, 2F = Horizontal Fillet, 3F = Vertical Fillet, 4F = Overhead Fillet (2F qualifies for 1F, 3F qualifies for 1F & 2F, 4F qualifies for 1F & 2F only).

TEST PLATE THICKNESS: Standard welder qualification test plates are 3/8" and 1" in thickness. The 3/8" qualifies for 3/4" max. thickness and 1" qualifies for unlimited thickness.

Comments:

OQASI Reviewer: <<Name of QA Inspector>> Date Review Completed:

Checked By: <<Name of Lead Inspector>>



TL-22 REVIEW OF CONTRACTOR'S PAINT QWP

STATE OF CALIFORNIA— CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor
 DEPARTMENT OF TRANSPORTATION
 Division of Engineering Services
 Materials Engineering and Testing Services
 Office of Quality Assurance and Source Inspection



REVIEW OF CONTRACTOR'S PAINTING QUALITY WORK PLAN

To: [] Resident Engineer Date: []
 Tel. No.: [] Fax No.: []
 From: [] Branch Chief Contract No.: []
 QWP Received: [] EFIS: XXXXXXXXXXXX
Vendor # XXX

The Contractor's Quality Work Plan Submittal #: [] Rev. # [] has been reviewed.

- substantially complies with specification requirements and approval is recommended
- approval is recommended as noted; see comments below
- needs to be resubmitted and unacceptable (reject) items corrected as per comments

General Contractor: []

- Materials to be Painted:
- Structural Steel (59-2)
 - Sign Structures (59-4)
 - Joint Seal Assemblies (51-2)
 - Steel Soldier Piles (59-2)
 - Column Casings (60-4)
 - Bar Type Restrainers (60-4)
 - Other: []
- Applicable SSPC:
- SP 1
 - SP 6 / NACE No. 3
 - SP 10 / NACE No. 2
 - PA 2
 - AB 1
 - AB 2
 - AB 3
 - Technology Guide 15
- Applicable ASTM:
- D1640
 - D3363
 - D4259
 - D4263
 - D4417
 - D4541
 - D4752
 - Other: []

QWP ITEMS REVIEWED	COMPLIES
A Name of painting firm: []	<input type="checkbox"/> Yes <input type="checkbox"/> No
B Copy of SSPC/ASTM	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
C Copy of coating manufacturer's guidelines, recommendations for surface preparation, painting, drying, curing, handling, shipping, storage. Includes: testing methods, maximum allowable levels for soluble salts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
AASHTO M300 Type I or II – Coating selected from authorized material list	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
D Proposed methods and equipment to be used	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
E Required Certifications	
1. SSPC – QP 1	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. SSPC – QP 2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. AISC-420-10/SSPC – QP 3	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
In lieu of #1-3 above, written documentation of (per Special Provisions only):	
1. Section 4, SSPC – QP 1	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Sections 4.2 through 4.5.6, SSPC – QP 2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. Sections 5 through 18, AISC-420-10/SSPC – QP 3	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
For work requiring SSPC-QP 1 or SSPC-QP 2 certification:	
1. List of all personnel who will perform blast cleaning or spray painting work.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Proof of CAS certifications, as required under (1) SSPC-QP 1, Mandatory Annex A and (2) the SSPC CAS Implementation Schedule in effect at the time of contract advertisement.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A



OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION - REVIEW OF CONTRACTOR'S PAINTING QUALITY WORK PLAN

F Methods to control environmental conditions, encompassing manufacturer's recommendations and the Special Provisions. Includes: Temperature and Humidity Requirements, Effects of Environment on Corrosion.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
G Methods to protect coating during curing, shipping, handling, storage.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
H Rinse Water Collection Plan	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
I Detailed Paint Repair Plan. Includes: Types of Defects, Acceptable Repair Procedures	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
J Procedures for containing blast media and water during application and repair of erected steel	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
K Copies of Daily Report forms to be used. Includes: Type of Testing, Weather Conditions	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
L Coatings selected for use comply with the volatile organic compound concentration limits specified for the air quality district where the project is located	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
M Other: <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

General Contractor:

Notes:

OQASI Reviewer: Date Review Complete:

OQASI Branch Chief:

(Page 2 of 2) Contract No.:



TL-23 REVIEW OF CONTRACTOR'S WELDING QCP

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY Gavin Newsom, Governor
 DEPARTMENT OF TRANSPORTATION
 Division of Engineering Services
 Materials Engineering and Testing Services
 Office of Quality Assurance and Source Inspection



FOR DEPARTMENT INTERNAL USE ONLY

REVIEW OF CONTRACTOR'S WELDING QUALITY CONTROL PLAN

RE: <<RE Name>> Date: <<Date of Transmittal>>
 Tel. No.: <<RE Telephone Number>> Fax No.: <<RE Fax Number>>
 MR: <<MR Name>> Contract No.: XX-XXXXXX
 QCP Received: <<Date>> EFIS: XXXXXXXXXXXX
Vendor No.: vXXX

The Contractor's Quality Control Plan Submittal #: _____ Rev. # _____ has been reviewed.
 QCP substantially complies with specification requirements and approval is recommended.
 QCP approval is recommended as noted, see comments below.
 QCP needs to be resubmitted and unacceptable (reject) items corrected as per comments below.

General Contractor: _____ Shop QCP Field QCP
 Materials to be Welded: Struct. Steel (55) Piling (49) Rebar (52) Sign Structures (56) Sig Poles (86) Other: _____
 NDT Required: RT UT MT Visual Only
 UT Qualification must be verified by written and practical exams: Yes No
 Specifications: D1.1 (yr) D1.4 (yr) D1.5 (yr) D1.6 (yr) Other: _____

QCP ITEMS REVIEWED		COMPLIES
Organization	1. Name of welding firm: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
	2. Name of Welding QCM hired by Contractor: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	3. Name of Quality Control Inspection Firm hired by Contractor, if applicable: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	4. Name of NDT Firm hired by Contractor, if applicable: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	5. Organizational chart showing the QCM, all subcontractors performing welding, QC firms and personnel, and NDT firms and personnel.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Qualifications/Certifications	6. Copy of AISC Category III Certification, if applicable.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	7. Name, qualifications, and documentation of certifications of the following: i. Welding QCM <input type="checkbox"/> Yes <input type="checkbox"/> No ii. QC Inspectors (CWIs) # of submittals: _____ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A iii. Assistant QC Inspectors (CAWIs) # of submittals: _____ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	8. A master list of qualified welders that documents the names, ID of each welder with the process, position, and date qualified.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	9. A method for maintaining and providing the Engineer a current master list of qualified welders that documents the names of each welder with the process, position, and date qualified.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	10. Documentation of all certifications for welders, welding operators, and tack welders for each weld process, position and the joint detail used. Certifications shall list the filler metals used, test position, base metal and thickness, tests performed, and the witnessing authority (3 rd party CWI). Documentation shall be approved by the Engineer prior to any welding performed by the welder/welding operator. # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
 Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



FOR DEPARTMENT INTERNAL USE ONLY

QCP ITEMS REVIEWED (Continued)		COMPLIES
OC Procedures	11. Methods and frequencies for performing all required visual inspections and documentation by which continuous visual inspection will not lapse for a period exceeding 30 minutes.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	12. System and method of documentation for the identification and tracking of all welds, NDT, any required repairs, and re-inspection of non-conforming welds. System shall include provisions for permanently identifying each weld and the person who performed the weld, WPS and parameters used, NDT, inspection, and repair. WPS parameters include amps, volts, travel speed, preheat and interpass temperatures.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	13. Copies of Quality Control forms to be used to include certificates of compliance, daily production logs, weld repair tracking logs, visual inspection report forms and daily reports.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	14. The methods, procedures, and log to track rejected lengths of weld by welder, position, process, joint configuration, and piece number.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	15. Standard procedures for identifying members distorted by welding and monitoring methods for straightening members distorted by welding.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	16. FCP which are applicable to the welding being performed.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
WPS / PQR	17. Prequalified Welding Procedure Specification (WPS). # of submittals <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	18. Documentation, when applicable, of Procedure Qualification Record (PQR) tests within the allowable period of effectiveness including all worksheets. # of submittals <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	19. Welding Procedure Specifications (WPSs) supported by PQR testing. # of submittals <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	20. Electrode, flux, and shielding gas certifications to be used in the work and documentation of recommended manufacturer electrode operating ranges. # of submittals <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
NDT Other than Visual	21. Written Practice of the NDT inspection personnel or firm.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	22. Name of certifying authority and outside Level III, if applicable.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	23. Names, qualifications, and documentation of certifications of NDT personnel to be used to include level of certifications and expiration date. # of submittals <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	24. List of NDT equipment, calibration procedures, frequencies and current qualification/calibration documentation of equipment to be used.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	25. Procedures, methods and frequencies for performing all required NDT as required by the specification to include minimum amounts required.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	26. Code of Safe Practices when Radiographic Testing (RT) is performed.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	27. Copies of NDT report forms to be used.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	28. Other: <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Comments:

OQASI Reviewer:

Date Review Completed:



TL-24 WELDING QCP NCR

STATE OF CALIFORNIA – CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

Gov'n Newsom, Governor



**REPORT OF NON-CONFORMING ITEMS OF CONTRACTOR'S
WELDING QUALITY CONTROL PLAN SUBMITTAL**

To: <<RE Name>>, Resident Engineer Date: <<Date of Transmittal>>
Tel. No.: <<RE Telephone Number>> Fax No.: <<RE Fax Number>>
From: <<Branch Chief Name>>, Branch Chief Contract No.: XX-XXXXXX
EFIS: XXXXXXXXXXXX

The following items in _____'s QCP submittal # _____, Revision # _____ are unacceptable for the following reasons:

ITEMS FOUND UNACCEPTABLE	REASON
1. Name of welding firm	_____
2. Name of QCM	_____
3. Name of QC Inspection Firm	_____
4. Name of NDT Firm	_____
5. Organizational chart	_____
6. AISC Category III Certification	_____
7. QC Personnel Documentation	_____
8. Welding Personnel Documentation	_____
9. Master list of qualified welders	_____
10. A method for maintaining master list of qualified welders	_____
11. Visual inspection and documentation procedures	_____
12. Weld, NDT, and repair tracking procedures	_____
13. Quality Control forms	_____
14. Electrode, flux, and shielding gas certifications	_____
15. Code books submitted	_____
16. Non-critical repair weld procedures	_____
17. Pre-qualified WPS	_____
18. Documentation of PQR tests	_____
19. Non-prequalified WPSs	_____
20. Non-critical repair weld WPSs	_____
21. Written Practice of the NDT inspection personnel or firm	_____
22. NDT report forms	_____
23. Certifying authority and/or outside Level III	_____
24. NDT personnel certifications	_____
25. NDT equipment, calibrations, frequencies, and documentation	_____
26. NDT methods and procedures	_____
27. Code of Safe Practices (RT)	_____
28. Identification and tracking system for radiographs.	_____
29. Other: _____	_____

OQASI Reviewer: _____ Date Review Complete: _____

Branch Chief: _____

TL-24, Welding QCP Nonconformance Report (02/16/2021 NM)



TL-25 REVIEW OF CONTRACTOR'S WELDING FCP

CONTRACTOR'S FRACTURE CONTROL PLAN (FCP) SUBMITTAL FOR WELDING

To: <<RE Name>>, Resident Engineer Date: <<Date of Transmittal>>
 Tel. No.: <<RE Telephone Number>> Fax No.: <<RE Fax Number>>
 From: <<Branch Chief Name>>, Branch Chief Contract No.: XX-XXXXXXX
 QCP Received: <<Date QCP Received by OQASI>> EFIS: XXXXXXXXXXXXX
 Vendor No.: vXXXX

The Contractor's Fracture Control Plan Submittal #: _____ Rev. # _____ has been reviewed.
 FCP substantially complies with specification requirements and approval is recommended.
 FCP needs to be resubmitted and unacceptable (reject) items corrected as per Notes.

General Contractor: _____ Contractor's QCM: _____
 Welding Firm: _____ NDT Firm: _____

Specifications : AWS D1.5 (YT)

FRACTURE CONTROL PLAN (FCP) ITEMS TO BE SUBMITTED AS A MINIMUM	COMPLIES
1. Base Metal used meets project and code requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Consumable meets the requirements of heat or lot testing by the manufacturer	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. Weld metal strength and ductility conform to tables 4.1 or 4.2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4. Weld metal toughness meets table 12.1 requirements or the undermatching yield strength of a minimum toughness of 25ft-lb @ -20°F.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5. WPSs' requiring PQR test (according to section 12.7). # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
6. Pre-qualified WPS (PQR not required) (According to section 12.7.1 # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
7. Base metal repair procedure	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8. Tack weld procedures (According to section 12.13). # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
9. Lead QC name, qualifications, and resume. Work history needs to show a minimum of 3 years experience in steel bridge fabrication inspection.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
10. NDT methods, personnel qualifications, eye exams, frequency of testing, reports to be used, and written practice of NDT firm. (see Sec. 12.16.1.2-5)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11. Electrode & Shielding Gas Certs. for each weld process and base metal combination. # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
12. Welder Qualifications for each process & position that each welder will perform. Welder Qualification tests shall be within 6 months of FCM work and shall be qualified by both mechanical (bend) and radiograph tests according to section 12.8.2 and 5 Part B. # of submittals: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
13. Daily Production & Inspection Log of Welds by Lead QC Inspector	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
14. Noncritical Repair Welding Procedures such as surface discontinuities. Noncritical repair WPS shall meet the requirements of Section 12.17.2 and 12.17.2.1	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
15. Critical Repair Welding Procedures (According to Section 12.17.3).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
16. Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

OQASI Reviewer: _____ Date Review Complete: _____
 Branch Chief: _____

TL-25 Review of Contractor's Welding FCP (02/16/2021 NM)

Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
 Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



TL-26 WELDING FCP NCR

REPORT OF NON-CONFORMING ITEMS OF CONTRACTOR'S
WELDING FRACTURE CONTROL PLAN SUBMITTAL

To: <<RE Name>>, Resident Engineer Date: <<Date of Transmittal>>
 Tel. No.: <<RE Telephone Number>> Fax No.: <<RE Fax Number>>
 From: <<Branch Chief Name>>, Branch Chief Contract No.: XX-XXXXXX
 General Contractor: Welding Firm:
 Submittal #: NDT Firm:

The following items in the Contractor's FCP submittal are **unacceptable** for the following reasons:

ITEMS FOUND UNACCEPTABLE	REASON
1. Base Metal	<input type="text"/>
2. Consumables	<input type="text"/>
3. Weld metal strength and ductility	<input type="text"/>
4. Weld metal toughness	<input type="text"/>
5. WPS' requiring PQR test	<input type="text"/>
6. Prequalified WPS	<input type="text"/>
7. Base metal repair procedure	<input type="text"/>
8. Tack weld procedures	<input type="text"/>
9. Lead QC	<input type="text"/>
10. NDT methods and qualifications.	<input type="text"/>
11. Electrode & Shielding Gas Certs.	<input type="text"/>
12. Welder Qualifications	<input type="text"/>
13. Daily Production & Inspection Log	<input type="text"/>
14. Noncritical Repair Welding Procedures	<input type="text"/>
15. Critical Repair Welding Procedures	<input type="text"/>
16. Other: <input type="text"/>	<input type="text"/>

OSM Reviewer: _____ Date Review Complete: _____
 Branch Chief: _____

TL-26, Welding FCP NCR (April 2002)



TL-27 REVIEW OF CONTRACTOR'S WPS/PQR

STATE OF CALIFORNIA — CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<< Select Branch >>
 << Select Address >>
 << Select City, State, Zip >>
 << Select Phone # >>
 << Select Fax # >>

Contract #: XXX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty: _____ Rte: _____ PM: _____
 Vendor # v: XXXX

REVIEW OF CONTRACTOR'S WPS / PQR SUBMITTAL

To: <<RE Name>> Date Received: <<Date Received>>
 Tel. No.: <<RE Phone Number>> Fax No: <<RE Fax Number>>
 Welding Firm: _____ Contract No: XXX-XXXXXX
 Materials to be Welded: Struct. Steel Misc. Rebar Col. Casings H-Piles Pipe Piles
 Governing AWS Code: D1.1 (yr) D1.4 (yr) D1.5 (yr) D1.6 (yr)
 Base Metal: <<Base Metal>> Grade: <<Grade of Metal>> Max. Thickness Welded: <<3/4' or Unlimited>>

The following WPS / PQRs submitted for use on this contract have been reviewed by this office based on governing AWS Code and contract specifications.

WPS #	Revision #	Prequalified or PQR #	Date	Weld Process	Weld Position	Complies
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	_____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No

WELDING PROCESSES: SMAW (Shielded Metal Arc Welding), FCAW-S (Flux Cored Arc Welding, Self-Shielded), FCAW-G (Flux Cored Arc Welding Gas Shielded), SAW (Submerged Arc Welding), and GMAW (Gas Metal Arc Welding).

WELDING POSITIONS: 1G = Flat Groove, 2G = Horizontal Groove, 3G = Vertical Groove, 4G = Overhead Groove (2G qualifies for 1G, 3G qualifies for 1G & 2G, 4G qualifies for 1G & 2G only). Groove weld qualification also qualifies welder for fillet welding in same position. 1F = Flat Fillet, 2F = Horizontal Fillet, 3F = Vertical Fillet, 4F = Overhead Fillet (2F qualifies for 1F, 3F qualifies for 1F & 2F, 4F qualifies for 1F & 2F only).

TEST PLATE THICKNESS: Standard welder qualification test plates are 3/8" and 1" in thickness. The 3/8" qualifies for 3/4" max. thickness and 1" qualifies for unlimited thickness.

Comments: _____

OQASI Reviewer: <<Name of QA Inspector>> Date Review Completed: _____

Checked By: <<Name of Lead Inspector>>

Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
 Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 2. Structure Representative (if applicable)



TL-28 NOTICE OF MATERIALS TO BE INSPECTED

STATE OF CALIFORNIA— CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>

EA #: XX-XXXXXX
 City Rte PM
 Vendor # vXXXX

NOTICE OF MATERIALS TO BE INSPECTED AT JOBSITE

To: <<Resident Engineer's Name>> Date: M/D/YYYY
 <<RE's Address>>
 <<RE City, State ZIP>>

Contractor: <<Contractor Name>>
 <<Contractor Address>>
 <<Contractor City, State ZIP>>

The following material will not be inspected at the source. The Resident Engineer should inspect or sample at the job site. Assistance is available from the nearest source inspection branch listed above.

Bid Item #	Material Description	Source
<<##>>	<<Material Description>>	<<Company Name>> <<Street Address>> <<City, State Zip>>
<<##>>	<<Material Description>>	<<Company Name>> <<Street Address>> <<City, State Zip>>
<<##>>	<<Material Description>>	<<Company Name>> <<Street Address>> <<City, State Zip>>

Comments: <<Insert Comments Here>>

<<SELECT METS Rep>>
 METS Representative



TL-29 REPORT OF INSPECTION OF MATERIALS

STATE OF CALIFORNIA— CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor
DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION

<<Select Branch>> Contract # : XX-XXXXXX
 <<Select Address>> EFIS # : XXXXXXXXXXXX
 <<Select City, State, Zip>> City [] Rte [] PM []
 <<Select Phone #>> Vendor # yXXXX
 <<Select Fax #>>

REPORT OF INSPECTION OF MATERIAL

Resident Engineer <<RE Name>> Date Inspected: MD/YYYY
 Address: <<Address>> Previous Lot: #<<Previous Lot Number(s)>>
 City: <<City, State Zip>>

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> OQASI Arrival Time: <<Military Time>>
 Prime Contractor: <<Name of Prime Contractor>> OQASI Departure Time: <<Military Time>>
 Contractor: <<Name of Contractor, Vendor, or Supplier>> Location: <<Location of inspection>>

The following material has been inspected in accordance with Section 6 of the Standard Specifications and found to substantially comply* with contract plans and specifications.

Lot #	Bid Item #	Quantity	Material Description

Identification: <<location of orange tags, spray paint, etc.>> Shipped to: Jobsite

Summary of Items Observed and Conversations: <<Describe observations. Include tests witnessed, samples taken, any OKs to cut. List QC name and annotate if he or she was present. Include as much detail as possible. If applicable, specify reasons for not releasing material. >>

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of Reviewer>> QA Reviewer

*Based on random sampling, testing and inspection procedures. Subject to final inspection by the Resident Engineer.



TL-38 INSPECTION REQUEST

CALTRANS
OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION
 <<SELECT STREET ADDRESS>>
 <<SELECT CITY, STATE, ZIP>>
 PHONE: <<SELECT PHONE #>>
 EMAIL ADDRESS: <<SELECT EMAIL ADDRESS>>

SCHEDULED DATE: INSPECTOR ASSIGNED:
 OR MATERIAL WILL NOT BE INSPECTED AT THE SOURCE AT THIS TIME
 CONFIRMED BY: This section is for METS LAB use only

INSPECTION REQUEST

NUMBER OF PAGES INCLUDING COVER PAGE: (.....)

CONTRACT NO: INSPECTION DATE REQUESTED:
 (EA - XX-XXXXXX) *Requests must be received at least 3 business days prior to the inspection date requested. A notice of at least 5 business days is required at locations outside the State of California but within the U.S. Submit an inspection request form 50 days before the planned production start for a material source outside the United States. Notify the Engineer at least 20 days before the actual start. A notice of at least 7 days is required before performing any procedure qualification tests. A notice of at least 10 days is required before performing any welding of Class N steel pipe piles.*

MATERIALS OR ACTIVITIES TO BE INSPECTED:

BID ITEM #	ITEM CODE*	MATERIAL DESCRIPTION	QUANTITY TO BE INSPECTED

* 6-digit code can be found at the beginning of each contract's special provisions

WELDING: SHOP FIELD PROCEDURE/QUALIFICATION TEST CONCRETE
 OTHER
 COMMENTS:

COMPANY NAME: E-MAIL:
 PHONE: (.....) FAX: (.....)
 ADDRESS / CITY / ZIP CODE:
 PERSON REQUESTING INSPECTION:
 PERSON TO CONTACT ON SITE: PHONE: (.....)

Note: Inspection will only be done at the location where the material is located. All appropriate documents should be readily available for our inspector to verify. Be aware that any other material not listed on the inspection form will not be inspected without prior confirmation. We expect to be able to confirm your inspection date on the next business day following receipt of this form. Please notify this office of all changes to your schedule at least 24 hours prior to the scheduled inspection date. Incomplete or incorrectly filled out forms will delay the inspection process. Be advised that due to the unpredictable nature of inspections, OQASI staff will not schedule appointments for a specific time of day. Inspections of material in production may occur at any time. Please remember to provide safe access to all material requiring inspection. This form can be downloaded off the web at:
<http://www.dot.ca.gov/mets/inspection-request/>

TL-38, Inspection Request Form (01-20-2021 NIM)



TL-608 NOTICE OF MATERIALS TO BE FURNISHED

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract #: XXX-XXXXXX
 City Rte PM
 Vendor # vXXXX

NOTICE OF MATERIALS TO BE FURNISHED

To: <<Source Vendor Name>>
 <<Vendor Address>>
 <<Vendor City, State ZIP>>
Date: M/D/YYYY

Contractor: <<Prime Contractor Name>>
 <<Contractor Address>>
 <<Contractor City, State ZIP>>

Resident Engineer: <<RE Name>>
Address: <<Address>>
City: <<City, State Zip>>

The above contractor has notified this department that your firm is to furnish the following materials:

Bid Item #-Material Description

<Item number -Material Description>>

In accordance with Section 6-1.01 of the California Department of Transportation Standard Specifications, this material is subject to our inspection and release before shipment is made. Please notify this office as soon as manufacture or fabrication is proposed or as soon as sampling is required. Sampling, tests, and inspection will be made in accordance with Section 6 of the Standard Specifications.

Source inspection is random and does not relieve the contractor of the full responsibility of incorporating materials in the work that comply in all respects with the contract plans and specifications, nor does it preclude the subsequent rejection of materials found to be unsuitable.

Material shipped without proper release shall constitute sufficient reason for rejection.

Please email the attached Inspection Request Form (TL-38) back to the designated Quality Assurance and Source Inspection Branch. This office must receive the request with sufficient time to complete testing or sampling prior to shipment. Your cooperation in this matter is greatly appreciated.

Sincerely,

<<SELECT MR>>
 METS Representative

TL-608 Notice of Materials to be Furnished (04/08/2021 VS)

Page 1 of 1

1. Resident Engineer

2. Contractor

Routing Instructions:

3. Vendor

(ATTN: QC DEPT.)

4. Contract File



TL-649 VERIFICATION OF MATERIALS ON HAND

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

EA #: XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 City [] Rte [] PM []
 Vendor # vXXX

REPORT OF MATERIALS ON HAND

Resident Engineer: <<RE Name>> Date Inspected: M/D/YYYY
 Address: <<Address>>
 City: <<City, State Zip>>

Contractor: <<Name of Contractor, Vendor, or Supplier>> OQASI Arrival Time: <<Military Time>>
 Location: <<Location of inspection>> OQASI Departure Time: <<Military Time>>

I have inspected the materials listed below and verified that the following is the current condition, status and storage of said material (refer to contractor's request for payment, CP-CEM-5101, dated <<Date>>).

Items	Material Description	Quantity	Status of Fabrication	Condition/ Storage

Above quantities determined from: <<Enter data>>
 Description of how stock material will be stored and inventoried: <<Enter data>>
 Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of Lead Inspector>> QA Reviewer

Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
 Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



TL-6011 NOTICE OF SHIPMENT OF MATERIAL

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>> Contract #: XX-XXXXXX
 <<Select Address>> EFIS: XXXXXXXXXX
 <<Select City, State, Zip>> City Rte PM
 <<Select Phone #>> Vendor # vXXXX
 <<Select Fax #>>

COMPONENT MATERIAL INSPECTION REPORT

Resident Engineer: <<RE Name>> Date Inspected: M/D/YYYY
 Address: <<Address>> Previous Lot: #<<Previous Lot Number(s)>>
 City: <<City, State Zip>>
 Contractor: <<Name of Contractor, Vendor, or Supplier>> OQASI Arrival Time: <<Military Time>>
 Location: <<Location of inspection>> OQASI Departure Time: <<Military Time>>
 Bridge No.: <<Enter number or Unknown>> Component: #<<i.e. Piece Number(s)>>

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

To be shipped to the following vendor or locations: <<Enter where material is being shipped>>

Lot #	Bid Item #	Quantity	Material Description

Identification: <<location of green tags, spray paint, etc.>>
 Summary of Items Observed and Conversations: <<Describe observations. Include tests witnessed or verified. List QC name and annotate if he or she was present. Include as much detail as possible. If applicable, specify reasons for not releasing material. >>
 Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of Reviewer>> QA Reviewer

Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
 Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



TL-6012 REPORT OF INSPECTION OF STOCK MATERIAL

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<< Select Branch >>
 << Select Address >>
 << Select City, State, Zip >>
 << Select Phone # >>
 << Select Fax # >>

File Under Name
 Of Contractor, Manufacturer
 or Supplier

REPORT OF INSPECTION OF STOCK MATERIAL

Date Inspected: M/D/YYYY

Contractor: <<Name of Contractor, Vendor, or Supplier>> OQASI Arrival Time: <<Military Time>>
 Location: <<Location of inspection>> OQASI Departure Time: <<Military Time>>

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

Lot #	Quantity	Material Description

Identification: <<location of green tags, spray paint, etc.>>

Summary of Items Observed and Conversations: <<Describe observations. Include tests witnessed or verified. List QC name and annotate if he or she was present. Include as much detail as possible. If applicable, specify reasons for not releasing material. >>

Description of how stock material will be stored and inventoried: <<Describe procedures the vendor has established to meet OQASI guidelines for "Green Tag" stock. Include pre-designated storage area and inventory procedures to ensure material is only shipped to State jobs. >>

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of Reviewer>> QA Reviewer



TL-6014 MATERIAL SUITABILITY REPORT

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract #: XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty [] Rte [] PM []
 File # vXXX

MATERIAL SUITABILITY REPORT

Resident Engineer: <<RE Name>> Report Date: M/D/YYYY
 Address: <<Address>> Previous Lot #: <<Previous Lot Number(s)>>
 City: <<City, State Zip>>

The following material has been determined to be suitable for its intended purpose:

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> Date of NCR: <<M/D/YYYY>>
 Prime Contractor: <<Name of Prime Contractor>>
 Contractor: <<Name of Contractor, Vendor, or Supplier>> Location: <<Location of nonconformance>>

Lot#	Bid Item #	Quantity	Material Description
[]	[]	[]	[]
[]	[]	[]	[]
[]	[]	[]	[]

MR #	Description of Non-Conformance
<<XX-XXX>>	[]

Summary of Items Observed and Conversations: <<Describe observations. Include tests witnessed, samples taken, any OKs to cut. List QC name and annotate if he or she was present. Include as much detail as possible. If applicable, specify reasons for not releasing material. >>

Identification: <<location of blue tags, spray paint, etc.>>

Comments: Should you require further recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of OQASI Reviewer>> <<Title (Branch Senior, MR, etc.)>>

- Hardcopy Routing Instructions:* 1. Responsible Branch Contract File (with supporting documentation)
Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



TL-6031 WELDING INSPECTION REPORT

STATE OF CALIFORNIA - CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



Contract #:
 EFIS:
 City Rte PM
 Vendor #

WELDING INSPECTION REPORT

Resident Engineer: Date Inspected:
 Address:
 City:

Project Name: OQASI Arrival Time:
 Prime Contractor: OQASI Departure Time:
 Contractor: Location:

CWI Name: <input type="text" value="<<CWI Name>>"/>	CWI Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Inspected CWI reports: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Rod Ovens in Use:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Electrode to Specification: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Weld Procedures Followed:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Qualified Welders: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Verified Joint Fit-up:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Approved Drawings: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Approved WPS:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Delayed/Cancelled:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Bridge No.: Component:

Summary of Items Observed:
 Summary of Conversations:

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: Quality Assurance Inspector
 Reviewed By: QA Reviewer



TL-6032 WELDING FITNESS REPORT

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract # : XX-XXXXXX
 EFIS: XXXXXXXXXX
 Cty: Rte PM
 Vendor # vXXX

WELDING WITNESS REPORT

Resident Engineer: <<RE Name>> Date Inspected: M/D/YYYY
 Address: <<Address>>
 City: <<City, State Zip>>

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> OQASI Arrival Time: <<Military Time>>
 Prime Contractor: <<Name of Prime Contractor>> OQASI Departure Time: <<Military Time>>
 Contractor: <<Name of Contractor, Vendor, or Supplier>> Location: <<Location of inspection>>

Witness: Procedure Qualification Record Welder Qualification Fracture Critical
 Welding NDT Mechanical Testing, describe: _____

Index Lot #: << # of insp. who witnesses test plate>> Witness Lot #: << # insp. for subsequent tests>>

Bridge # <<Enter number or Unknown>> Component #: <<i.e. Piece Number(s)>>

Welder: <<Name of Welder>> ID #: <<Welder's Identification #>>

Joint Description	<input type="checkbox"/>	<input type="checkbox"/> N/A	WPS ID:	<input type="checkbox"/>	<input type="checkbox"/> N/A
Base Metal:	<input type="checkbox"/>	<input type="checkbox"/> N/A	PQR ID	<input type="checkbox"/>	<input type="checkbox"/> N/A
Thickness:	<input type="checkbox"/>	<input type="checkbox"/> N/A	Process:	<input type="checkbox"/>	<input type="checkbox"/> N/A
Electrode Spec/Class	<input type="checkbox"/>	<input type="checkbox"/> N/A	Position	<input type="checkbox"/>	<input type="checkbox"/> N/A
Backing Material:	<input type="checkbox"/>	<input type="checkbox"/> N/A	CWI:	<input type="checkbox"/>	<input type="checkbox"/> N/A
Average Amps:	<input type="checkbox"/>	<input type="checkbox"/> N/A	AWS Code	<input type="checkbox"/>	<input type="checkbox"/> N/A
Average Volts	<input type="checkbox"/>	<input type="checkbox"/> N/A	Applicable Sec.:	<input type="checkbox"/>	<input type="checkbox"/> N/A
Travel Speed:	<input type="checkbox"/>	<input type="checkbox"/> N/A	Heat Input	<<Not Temp.>>	<input type="checkbox"/> N/A
Preheat:	<input type="checkbox"/>	<input type="checkbox"/> N/A			

Summary of Items Observed: <<Describe observations; include as much detail as possible>>

Summary of Conversations: <<Document any pertinent project discussions>>

Observed welding, testing or results: is in general conformance with the contract requirements
 is not in conformance with the contract requirements.

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of Lead Inspector>> QA Reviewer



TL-6033 CONCRETE INSPECTION REPORT

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>> Contract #: XX-XXXXXX
 <<Select Address>> EFIS: XXXXXXXXXXXX
 <<Select City, State, Zip>> City: Rte: PM
 <<Select Phone #>> Vendor #: XXX
 <<Select Fax #>>

PRECAST CONCRETE INSPECTION REPORT

Resident Engineer: <<RE Name>> Date Inspected: <<Date>>
 Address: <<Address>>
 City: <<City, State Zip>>
 Project Name: <Job Name (i.e.Br. Name, Road, etc.)> OQASI Arrival Time: <Military Time>
 Prime Contractor: <Name of Prime Contractor> OQASI Departure Time: <Military Time>
 Contractor: <Name of Contractor, Vendor or Supplier> Location: <<Inspection Location>>
 Quality Control Contact: <QC POC> Quality Control Present: Yes No

Bid Item:
 Contract Quantity:
 Type of PC Member

Caltrans PC Audit Completed: Yes No Date: <DATE>
 Approved Shop Drawings: Yes No Date: <DATE>
 Approved Mix Design: Yes No Date: <DATE>
 Approved Strand: Yes No Date: <DATE>
 Approved PCQCP: Yes No Date: <DATE>
 Pre-fabrication Pre-Pour Pour Post -Pour Final Release

Note: See attached "Supplemental Concrete Checklist";

Summary of Items Observed

Summary of Conversation

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of reviewer>> QA Reviewer



TL-6034 SOURCE INSPECTION REPORT

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

EA #: XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty [] Rte [] PM []
 Vendor # vXXX

SOURCE INSPECTION REPORT

Resident Engineer: <<RE Name>> Date Inspected: M/D/YYYY

Address: <<Address>>

City: <<City, State Zip>>

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> OQASI Arrival Time: <<Military Time>>

Prime Contractor: <<Name of Prime Contractor>> OQASI Departure Time: <<Military Time>>

Contractor: <<Name of Contractor, Vendor, or Supplier>> Location: <<Location of inspection>>

Quality Control Contact: <<QC POC>>	Quality Control Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Material Transfer: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sampled Items:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Stock Transfer: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	OK to Cut:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Rebar Test Witness: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Delayed/Cancelled:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Other: []

Bridge No. <Enter number or Unknown>

Component: <<i.e. Piece Number(s)>>

Bid Item: <<Enter Bid Item #>>

Lot #: <<Assign Lot #>>

Summary of Items Observed: <<Describe observations; Include as much detail as possible; If applicable, you must specify reasons for not releasing material>>

Summary of Conversations: <<Document any pertinent project discussions>>

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of Reviewer>> QA Reviewer



TL-6035 QA LEAD VERIFICATION REPORT

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>

Contract # : XX-XXXXXX

EFIS: XXXXXXXXXXXX

Vendor # vXXX

QA VERIFICATION REPORT

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>>

Date: M/D/YYYY

Prime Contractor: <<Name of Prime Contractor>>

OQASI Arrival Time: <<Military Time>>

Contractor: <<Name of Contractor, Vendor, or Supplier>>

OQASI Departure Time: <<Military Time>>

QA Inspector: <<Name of QA Inspector>>

Location: <<Location of inspection>>

Progress Reports Current: Yes No N/A

NCR Summary Current: Yes No N/A

Forms Current: Yes No N/A

QASI Manual Available: Yes No N/A

Prepared for Inspection: Yes No N/A

QASI Manual Followed: Yes No N/A

Summary of Items Observed: <<Describe observations; include as much detail as possible>>

Summary of Conversations: <<Document any pertinent project discussions>>

Recommendations: <<List recommendations>>

<<Name of QA Inspector>>

Quality Assurance Inspector

TL-6037 WEEKLY FABRICATION REPORT

STATE OF CALIFORNIA - CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract # : XX-XXXXXX
 EFIS: XXXXXXXXXX
 Cty Rta PM
 Vendor # vXXXX

FABRICATION PROGRESS REPORT

Resident Engineer: <<RE Name>> Date Inspected: <<Date>>
 Address: <<Address>>
 City: <<City, State Zip>>

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> Period Covered From: <<From Date>>
 Prime Contractor: <<Name of Prime Contractor>> To: <<To Date>>
 Fabricator: <<Name of Fabricator, Vendor, or Supplier>> Location: <<Location of fabrication>>

Fabrication Type: Structural Steel Sign Structures
 Precast/Prestressed Concrete Other:

	Item 1	Item 2	Item 3	Item 4
Shop Job Number:				
Bid Item Number:				
Material Description:				
Contract Quantity:				
Raw Material Received to Date:				
Raw Material in Fabrication to Date:				
Members Completed and Accepted:				
Material Released Previously:				
Material Released During Period:				
Total Released to Date:				
Procedure Drawings Received:				
Welding Started:				
Approx. Fabrication Complete:	%	%	%	%

Remarks: <<Describe observations and/or pertinent conversations; include as much detail as possible; significant delays or material rejections must also be listed here>>

Inspected By: <<Name of QA Inspector>> Quality Assurance Inspector
 Reviewed By: <<Name of Reviewer>> QA Reviewer



TL-6040 DOCUMENT DISTRIBUTION

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
 <<Select Address>>
 <<Select City, State, Zip>>
 <<Select Phone #>>
 <<Select Fax #>>

Contract # : XX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty [] Rte [] PM []
 Vendor # v XXX

REPORT OF DOCUMENT DISTRIBUTION

<<Resident Engineer>>, Date (mm/dd/yyyy) []
 <<RE Mailing Address>> Project: <<Project Name>>
 <<RE Phone>>
 <<RE FAX >>

%: []
THE FOLLOWING DRAWINGS ARE BEING FORWARDED (or)

ATTACHED U.S. MAIL FILED

DRAWING NUMBER	NUMBER PRINTS	NO COMMENT	RESUBMIT	COMMENTS, be brief and concise

Additional lines, tab to end of line...
 Above Prints Are Structural Steel Shop Plans Electrical and Mechanical Shop Plans
 Prestressed Concrete Shop Plans Sign Structure Shop Plans
 Erection Drawings Other - []

REMARKS: (This review consisted of welding details for general compliance only. WPSs identified on shop drawings are not reviewed for compliance or applicability as part of the drawing review. These documents need to be submitted separately for review.) <<Additional remarks as necessary>>

Reviewer Name: <<Print Name>>
 Reviewer Signature: _____

Contract # : XX-XXXXXX



TL-6041 REPORT OF DRAWING REVIEW

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
OFFICE OF QUALITY ASSURANCE AND SOURCE INSPECTION



<<Select Branch>>
<<Select Address>>
<<Select City, State, Zip>>
<<Select Phone #>>
<<Select Fax #>>

Contract #: XXX-XXXXXX
EFIS: XXXXXXXXXXXX
City Rte PM
Vendor # vXXXX

REPORT OF DRAWING REVIEW

<<Resident Engineer>> Date
<<Address>> Project
<<City>> Submittal #:
<<Fax>> Date received:
<<Structures Rep.>>

THE FOLLOWING DRAWINGS ARE BEING FORWARDED (or)

ATTACHED U.S. MAIL FILED

Table with 5 columns: DRAWING NUMBER, NUMBER PRINTS, ACCEPTABLE AS SUBMITTED, RESUBMIT, COMMENTS, be brief and concise

Above Prints Are Structural Steel Shop Plans Electrical and Mechanical Shop Plans
Prestressed Concrete Shop Plans Sign Structure Shop Plans
Erection Drawings Other

REMARKS: This review consisted of drawing details for general compliance only. WPSs identified on shop drawings are not reviewed for compliance or applicability as part of the drawing review. These documents need to be submitted separately for review. Should you require recommendations concerning re-submittals or remedial efforts please contact MR, Phone Number, who represents the Office of Quality Assurance and Source Inspection for your project.

Reviewed By: Name of Reviewer QA Reviewer




TL-6042 COATING INSPECTION REPORT

STATE OF CALIFORNIA - CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 Office of Quality Assurance and Source Inspection



<< Select Branch >>
 << Select Address >>
 << Select City, State, Zip >>
 << Select Phone # >>
 << Select Fax # >>

Contract #: XXX-XXXXXX
 EFIS: XXXXXXXXXXXX
 Cty: Rte: PM
 Vendor #: XXXXX

COATING INSPECTION REPORT

Resident Engineer: <<RE Name>> Date Inspected: <<Date>>

Address: <<Address>>

City: <<City, State Zip>>

Project Name: <<Job Name (i.e Bridge Name, Road, etc.)>> OQASI Arrival Time: <<Military Time>>

Prime Contractor: <<Name of Prime Contractor>> OQASI Departure Time: <<Military Time>>

Contractor: <<Name of Contractor, Vendor, or Supplier>> Location: <<Location of inspection>>

Paint Inspector's Name: <<Inspector's Name>> Inspector Present: Yes No

leaning Performed: Yes No N/A Application Method Approved: Yes No N/A

last Profile Comply: Yes No N/A Humidity & Dew Point Comply: Yes No N/A

Pre-Approved Coating: Yes No N/A DFT Checked to PA-2: Yes No N/A

Sampled Tested by Lab: Yes No N/A DFT Comply: Yes No N/A

PQWP Approved: Yes No N/A Adhesion Pull Test OK: Yes No N/A

Application Method: <<i.e. Air, Airless, Roller, Brush>> Delayed/Cancelled: Yes No N/A

Bridge No.: <<Enter number or Unknown>> Component: <<i.e. Piece Number(s)>>

Coating Manufacture.: <<Brand i.e. Carboline>>

Part (A) Batch No.: <<Enter number or Unknown>> Lot No: <<Enter number or Unknown>>

Part (B) Batch No.: <<Enter number or Unknown>> Lot No: <<Enter number or Unknown>>

Summary of Items Observed: <<Describe observations; include as much detail as possible>>

Summary of Conversations: <<Document any pertinent project discussions>>

Comments: This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact <<MR, Phone Number>>, who represents the Office of Quality Assurance and Source Inspection for your project.

Inspected By: <<Name of Inspector>> Quality Assurance Inspector

Reviewed By: <<Name of Lead Inspector>> QA Reviewer

- Hardcopy Routing Instructions: 1. Responsible Branch Contract File (with supporting documentation)
- Electronic Copy Routing Instructions: 2. Branch Senior, Resident Engineer, MR 3. Structure Representative (if applicable)



17.8 Appendix 8: Material List Requiring Source Inspection

This table is not all encompassing and is intended as a guide. Project documents have higher precedence than this table. This table provides the minimal QA level of inspection and testing required. The Local Agency can always provide a higher/more intensive list of QA based on their analysis.

Electrical Material

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Services Enclosures	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*
Lighting Controls	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*
Sign Controls	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*
Battery Backup System Cabinets	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*
Telephone Demarcation Cabinets	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*
LED Extinguishable Message Signs	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely will be sent to a lab unless specialized portable equipment is available.*
Accessible Pedestrian Systems	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	Most likely can be inspected at the source with portable equipment.*



Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
334 cabinets	Yes	100%	QA verification of Standard Specification and Special Provision Requirements	334 cabinets used to control traffic is State Furnished. 334 cabinets used for other purposes will most likely be inspected at the source with portable equipment.*
Luminaries	No	Per 2010 RSS and 2015 SS & RSS	QA verification of Standard Specification and Special Provision Requirements	Most likely will be sent to a lab unless specialized portable equipment is available.*
LED Signal Traffic Modules & LED Signal Modules for Flashing Beacon Controllers	No	Per 2010 RSS and 2015 SS & RSS	QA verification of Standard Specification and Special Provision Requirements	Most likely will be sent to a lab unless specialized portable equipment is available.*
Pedestrian Countdown Modules	No	Per 2010 RSS and 2015 SS & RSS	QA verification of Standard Specification and Special Provision Requirements	Most likely will be sent to a lab unless specialized portable equipment is available.*
Closed Circuit TV Cameras	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Sign Light Fixtures	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Flashing Beacon Controller Assemblies (not including LEDs)	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
HAR Radio Systems	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*



Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Modems	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Microwave Vehicle Detection Systems	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Video Vehicle Detection Systems	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Battery Backup System Batteries	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Conduit	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Fiber Optic Equipment	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Fiber Optic Cable	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Loop Wire	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Pull Boxes	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*
Splice Vaults	No	N/A	Certificate of Compliance	RE/SR must verify COC at the jobsite.*

*Note: 100% post installation – field testing also required.

Fasteners

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
High Strength Bolts	Yes	55-G OQASI Manual	55-1.02A(1); 55-1.01D(3)(b)	Material sampling and testing including galvanizing and visual inspection; witness rotational capacity testing and document in inspection reports
High Strength Cap Screws	Yes	55-G OQASI Manual	86-2.04B(2)	Materials sampling and testing including galvanizing and visual inspection
Anchor Bolts	Yes	55-G OQASI Manual	55-1.02A(1)	Material sampling and testing including galvanizing and visual inspection
Nuts used with High Strength Bolts & Anchor Bolts	Yes	55-G OQASI Manual	55-1.02A(1)	Material sampling and testing including galvanizing and visual inspection
Washers used with High Strength Bolts & Anchor Bolts	Yes	55-G OQASI Manual	55-1.02A(1)	Material sampling and testing including galvanizing and visual inspection

Bearings

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Elastomeric bearing pads (plain reinforced)	No	(1) 8x12 in sample per lot	51-3.02A(4)(c); 51-3.02B(2)	Samples may be selected by Engineer or sent by fabricator



Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Elastomeric bearing pads (steel reinforced)	No	(1) 8x12 in sample per lot	51-3.02A(4)(c); 51-3.02B(3)	Samples may be selected by Engineer or sent by fabricator
PTFE Bearings	Yes	Per special provisions	See project special provisions & QASI manual section 51-D	CWI; SMR must accompany inspector on source inspections

Reinforcement

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify
Epoxy Coating Powder	No	1 per batch	52-2.01A(3)(b); 52-2.01A(3)(c)
Epoxy coated reinforcement (green or purple)	Yes	Per 52-2.02A(4) or 52-2.03A(4)	52-2.02A(4) or 52-2.03A(4)
Epoxy coated dowel bars & tie bars (includes baskets)	Yes	QASI Manual Section 40-C	40-1.02E (tie bars); 40-1.02F (dowel bars); 40-1.02G (baskets)
Stainless Steel Reinforcement	Yes	52-4	52-4
Headed Bar Reinforcement	Yes	52-5	52-5
Galvanized rebar	Yes	QASI Manual Section 52	52-3
Reinforcement splices: welded (hoops) or mechanical couplers	Yes	52-6.01D(5)	ASTM A706; California Test 670; Material verification, inspection and review of welding, galvanizing, visual and dimensional inspection; See QASI manual for more detail



Steel

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Structural Steel Bridge Members and Attachments	Yes	N/A	55; 59	See section 55 and 59 of the QASI manual; CWI; MT; UT
Bridge Joint Restrainers	Yes	See QASI Manual Sections 75-C and 75-E	75-1.03E(2)	CWI inspector required for welding inspection
Cable Type Restrainers	Yes	See QASI Manual Sections 75-C and 75-E	75-1.03E(2)	CWI inspector required for welding inspection
Miscellaneous iron and steel, misc. bridge metal, bearing assemblies, rings, and covers, frames and grates, etc	See QASI Manual Section 75	See QASI Manual Section 75	75	CWI inspector required for welding inspection
Paint Structural Steel	Yes	N/A	See QASI Manual Section 59	N/A
Paints for Metal	Yes	Per Batch	91-2	Must be tested before shipping to the jobsite.

Precast Concrete

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Tier 1 & Tier 2 Precast concrete (per 90-4.01D(1))	Yes	N/A	51; 90	See section 51 and 90 of the QASI manual; QA PCI lvl 1 for tier 1; QA PCI lvl 2 for tier t2
Prestressing Strand	Yes	50-1.01C(4)	50-1.01D(2)	N/A
Tier 3 pipes > 60 in diameter	Yes	QASI Manual Sections 65-B.02	AASHTO M 170 / AASHTO T 280 (D-Load); AASHTO T 280 (Absorption Test); AASHTO T 22 (Cylinder Breaks)	Check special provisions if all three test methods are required. At a minimum witness D-Load testing.

Joint Seals

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Joint seal, type A and AL	No	51-2.02B(1)(c)	51-2.02B(1)(d)	N/A
Joint seal, type B preformed elastomeric joint seal	Yes or sample at jobsite	1 per lot	51-2.02C(2)	N/A
Joint seal assembly > 4" Movement Rating	Yes	N/A	See 51-C of the QASI Manual	CWI inspector required for welding inspection; MT; UT

Poles and Signs

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify	Comments
Poles: signal & lighting	Yes	100%	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection; See QASI manual for more detail	CWI Inspector required
Overhead Sign Structures	Yes	N/A	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection	CWI; MT; UT
Signs: changeable message	Yes	N/A	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection; NDT as required; see QASI manual section 56-3	CWI; MT; UT

Steel Piles

Type of Material	Source inspection	Sampling Frequency	Type of Test/Standard to Verify
Class N Pipe Piles	Yes	N/A	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection
Steel Soldier Piles	Yes	100%	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection



17.9 Appendix 9: Sample Identification Card

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION		SAMPLE NUMBER:	
SAMPLE IDENTIFICATION CARD			
TL-0101 (REV. 10/12)			
TEST TYPE: <input type="checkbox"/> DIST. LAB <input type="checkbox"/> TRANS. LAB	SAMPLE SENT TO: <input type="checkbox"/> HDQRS. LAB <input type="checkbox"/> BRANCH LAB <input type="checkbox"/> DIST. LAB	FIELD NO. <input style="width:100%;" type="text"/>	
		DIST LAB NO. <input style="width:100%;" type="text"/>	
	SHIPMENT NO. <input style="width:100%;" type="text"/>	LOT NO. <input style="width:100%;" type="text"/>	
	AUTHORIZATION NO. <input style="width:100%;" type="text"/>	P.O. OR REQ. NO. <input style="width:100%;" type="text"/>	
SAMPLE OF: <input style="width:100%;" type="text"/>			
FOR USE IN: <input style="width:100%;" type="text"/>			
SAMPLE FROM: <input style="width:100%;" type="text"/>			
DEPTH: <input style="width:100%;" type="text"/>			
LOCATION OF SOURCE: <input style="width:100%;" type="text"/>			
THIS SAMPLE IS SHIPPED IN(NO. CONTAINERS)	<input style="width:100%;" type="text"/>	AND IS ONE OF A GROUP OF	<input style="width:100%;" type="text"/>
			SAMPLES REPRESENTING (TONS, GALS, BBLs, STA, ETC.) <input style="width:100%;" type="text"/>
OWNER OR MANUFACTURER: <input style="width:100%;" type="text"/>			
TOTAL QUANTITY AVAILABLE	<input style="width:100%;" type="text"/>	TEST RESULTS DESIRED <input type="checkbox"/> NORMAL <input type="checkbox"/> PRIORITY	DATE NEEDED <input style="width:100%;" type="text"/>
REMARKS: <div style="height: 80px;"></div>			
DATE SAMPLE: <input style="width:100%;" type="text"/>			
BY: <input style="width:100%;" type="text"/>			
TITLE: <input style="width:100%;" type="text"/>			
DIST. CO, RTE, PM: <input style="width:100%;" type="text"/>			
LIMITS: <input style="width:100%;" type="text"/>			
CONT. NO.: <input style="width:100%;" type="text"/>			
FED. NO.: <input style="width:100%;" type="text"/>			
RECIPIENT(S): (to be selected by data verifying/publishing engineer) <input style="width:100%;" type="text"/>			
CONTRACTOR: <input style="width:100%;" type="text"/>			
©DIME 2016			

17.10 Appendix 10: Material List Applicable Standards

Structural Material

(All references in the "Type of Test/Standard to Verify" column refers to the 2010 Standard Specification unless otherwise noted. The corresponding QASI manual section can also be referenced for more guidance. Local Agency to verify RSS or Special Provisions for changes to standard requirements)

Electrical Material

Type of Material	Type of Test/Standard to Verify
Service Enclosures	QA verification of Standard Specification and Special Provision Requirements
Flashing Beacon Controller Assemblies	QA verification of Standard Specification and Special Provision Requirements
Lighting Controls	QA verification of Standard Specification and Special Provision Requirements
Sign Controls	QA verification of Standard Specification and Special Provision Requirements
Battery Backup System Cabinets	QA verification of Standard Specification and Special Provision Requirements
Telephone Demarcation Cabinets	QA verification of Standard Specification and Special Provision Requirements
LED Extinguishable Message Signs	QA verification of Standard Specification and Special Provision Requirements
Accessible Pedestrian Systems	QA verification of Standard Specification and Special Provision Requirements
334 cabinets	QA verification of Standard Specification and Special Provision Requirements
Closed Circuit TV Cameras	QA verification of Standard Specification and Special Provision Requirements
Luminaries	QA verification of Standard Specification and Special Provision Requirements
LED Signal Traffic Signal Modules	QA verification of Standard Specification and Special Provision Requirements
Pedestrian Countdown Modules	QA verification of Standard Specification and Special Provision Requirements
Sign Light Fixtures	QA verification of Standard Specification and Special Provision Requirements
HAR Radio Systems	Certificate of Compliance
Modems	Certificate of Compliance
Microwave Vehicle Detection Systems	Certificate of Compliance
Video Vehicle Detection Systems	Certificate of Compliance
Battery Backup System Batteries	Certificate of Compliance
Conduit	Certificate of Compliance
Conductors	Certificate of Compliance



Type of Material	Type of Test/Standard to Verify
Cable	Certificate of Compliance
Fiber Optic Equipment	Certificate of Compliance
Fiber Optic Cable	Certificate of Compliance
Loop Wire	Certificate of Compliance
Pull Boxes	Certificate of Compliance
Splice Vaults	Certificate of Compliance

Fasteners

Type of Material	Type of Test/Standard to Verify
High Strength Bolts	55-1.02A(1); 55-1.01D(3)(b)
High Strength Cap Screws	86-2.04B(2)
Anchor Bolts	55-1.02A(1)
Nuts used with High Strength Bolts & Anchor Bolts	55-1.02A(1)
Washers used with High Strength Bolts & Anchor Bolts	55-1.02A(1)

Bearings

Type of Material	Type of Test/Standard to Verify
Elastomeric bearing pads (plain reinforced)	51-3.02A(4)(c); 51-3.02B(2)
Elastomeric bearing pads (steel reinforced)	51-3.02A(4)(c); 51-3.02B(3)
PTFE Bearings	See project special provisions & QASI manual section 51-D

Reinforcement

Type of Material	Type of Test/Standard to Verify
Epoxy Coating Powder	52-2.01A(3)(b) and 52-2.01A(3)(c)
Epoxy coated reinforcement (green or purple)	52-2.02A(4) or 52-2.03A(4)
Epoxy coated dowel bars & tie bars (includes baskets)	40-1.02E (tie bars); 40-1.02F (dowel bars); 40-1.02G (baskets)



Type of Material	Type of Test/Standard to Verify
Stainless Steel Reinforcement	52-4
Headed Bar Reinforcement	52-5
Galvanized rebar	52-3
Reinforcement splices: welded (hoops) or mechanical couplers	ASTM A706; California Test 670; Material verification, inspection and review of welding, galvanizing, visual and dimensional inspection; See QASI manual for more detail

Steel

Type of Material	Type of Test/Standard to Verify
Structural Steel Bridge Members and Attachments	55; 59
Bridge Joint Restrainers	75-1.03E
Cable Type Restrainers	75-1.03E(2)
Miscellaneous iron and steel, misc. bridge metal, bearing assemblies, rings and covers, frames and grates, etc	75
Painting Structural Steel	See QASI Manual Section 59
Paints for Metal	91-2

Precast Concrete

Type of Material	Type of Test/Standard to Verify
Tier 1 & Tier 2 Precast concrete (per 90-4.01D(1))	51; 90
Prestressing Strand	50-1.01D(2)
Tier 3 pipes > 60 in diameter	AASHTO M 170/AASHTO T 280 (D-Load); AASHTO T 280 (Absorption Test); AASHTO T 22 (Cylinder Breaks)

Joint Seals

Type of Material	Type of Test/Standard to Verify
Joint seal, type A and AL	51-2.02B(1)(d)
Joint seal, type B preformed elastomeric joint seal	51.2.02C(2)
Joint seal assembly > 4" Movement Rating	See 51-C of the QASI Manual

Poles and Signs

Type of Material	Type of Test/Standard to Verify
Poles: signal & lighting	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection; See QASI manual for more detail
Overhead Sign Structures	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection
Signs: changeable message	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection; NDT as required; see QASI manual section 56-3

Steel Piles

Type of Material	Type of Test/Standard to Verify
Class N Pipe Piles	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection
Steel Soldier Piles	Material verification, inspection and review of welding, galvanizing, painting, visual and dimensional inspection

17.11 Appendix 11: SIQMP Approval Letter

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 TRANSPORTATION LABORATORY – MS-5
 5900 FOLSOM BOULEVARD, ROOM 101
 SACRAMENTO, CA 95819-4612
www.dot.ca.gov



<<Date>>

<<LOCAL AGENCY CONTACT>>

Bay Area Rehabilitations Agency Project
 EA: <<05-555555>>

Dear <<MR./MS. AGENCY CONTACT>>:

On <<Date>, the Materials Engineering and Testing Services (METS) received the Bay Area Rehabilitation Agency's Source Inspection Quality Management Plan (SIQMP) associated with the North Bay Rehabilitation Project, <<05-555555>>.

On behalf of the State Materials Engineer per delegated authority, the SIQMP substantially complies with the Source Inspection Quality Management Plan Outline for Use by Implementing Agencies and is approved.

It is important to note that the SIQMP acceptance does not relieve the <<LOCAL AGENCY>> of its obligation to ensure that materials incorporated into the project by the Contractor are in compliance with all [contract](#) plans and specifications.

The SIQMP is to be used by the <<LOCAL AGENCY>> as a guide for verification of work leading to the acceptance of materials at the completion of the project.

Please inform the Oversight METS Representative for the project, <<OMR NAME>>, of any changes to the start of work date so that METS may coordinate our auditing activities. He / She may be reached at <<(555)555-5555>>.

Sincerely,

<<QASI BRANCH CHIEF>>

Chief, Quality Assurance and Source Inspection Branch
 Office of Quality Assurance and Source Inspection
 Materials Engineering and Testing Services
 Division of Engineering Services

c: District Encroachment Permit Engineer
 METS Materials Administrator
 Project Manager
 Oversight Engineer
 Structures Oversight Engineer

"Provide a safe and reliable transportation network that serves all people and respects the environment"



17.12 Appendix 12: QMA Audit Cover Letter

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DIVISION OF ENGINEERING SERVICES
 MATERIALS ENGINEERING AND TESTING SERVICES
 TRANSPORTATION LABORATORY – MS-5
 5900 FOLSOM BOULEVARD, ROOM 101
 SACRAMENTO, CA 95819-4612
www.dof.ca.gov



<<DATE>>

<<LOCAL AGENCY LIAISON CONTACT NAME>> Project EA: <<05-555555>>

Dear <<Mr. /Ms. Agency Liaison>>:

On <<Date>>, The Office of Quality Assurance and Source Inspection (OQASI) audited project files of <<LOCAL AGENCY NAME>> oversight project <<05-555555>>. The following is a summary of findings of this audit:

1. Source Inspection Report number 00-123 pertaining to steel pile releases referenced MTRs, but no corresponding MTRs were found on file.
2. NCRs 7 and 11 have been outstanding for three months without resolution and without a clear indication as to why they have not been resolved.
3. It was found that QC inspector Joe Smith, who initially had a valid CWI, now has an expired certificate. Mr. Smith has been performing weld inspections for the past 3 months without a current certificate.

Please see the attached audit report for full details. If you have any questions, or would like to discuss the issues, please call me at <<(555) 555-5555>>.

Sincerely,

<<BRANCH CHIEF NAME>>

Chief, Quality Assurance and Source Inspection Branch, << LA/ Sacramento/ Bay Area>> Office of Quality Assurance and Source Inspection
 Materials Engineering and Testing Services Division of Engineering Services

c: District Encroachment Permit Engineer
 METS Materials Administrator
 DES Chief, Office of Project Delivery

"Provide a safe and reliable transportation network that serves all people and respects the environment"



17.13 Appendix 13: QMA Audit Report

Subject: Audit Report
Project: 13-123456
Implementing agency: City of Sacramento
Date: 4/21/2012

GENERAL INFORMATION

Per Section 3 of SIQMP Outline, the office of Quality Assurance and Source Inspection performed a QMA audit of Project records. The scope of the audit included review of document control, interview with the implementing agency's key personnel and review of QA verification procedures. The audit started with an introductory meeting and ended with a debriefing meeting.

Attendees included:

- Resident Engineer Mr. Paul Revere
- OMR John Doe
- Contractor's QM Manager Mary Toinette

BACKGROUND

This report is for the QMA audit for the referenced project. The audit took place on 4/21/12 at the following location:

Facility: Project jobsite filing room,
1234 any street, Anytown, CA 09123

AUDIT SUMMARY

The main objective of the Department audit was to evaluate the following:

1. Review of document control,
2. Interview with the implementing agency's key personnel, and
3. Review of QA verification procedures

SUMMARY OF FINDINGS



Following an introductory meeting, document control procedures and files were randomly reviewed by the OMR. The RE was present during the audit and provided clarifications when needed.

In general, it appeared that the QA procedure as outlined in the approved SIQMP was being followed majority of the time, however, deviations were also observed. This included lack of MTRs referenced in inspection reports on a number of steel pile releases. It was also found that NCRs are not being adequately followed through resolution. NCRs numbers 7 and 11 have been pending for up to three months with no resolution and no status report on file.

The discussion and interview with key personnel including the RE indicated an overall satisfactory enforcement of the SIQMP and respect for the Source Inspection process.

Review of the QA verification procedure showed that the QA plan is being followed ensuring the Quality Control activities are occurring adequately. However, one instance of an expired certificate was observed which was of particular concern. In that instance, the CWI certificate of Joe Smith, the Contractor's designated weld inspector at Steel World facilities, had expired. Mr. Smith had initially had a valid CWI certificate, however, it expired in 2011 and no renewal notice appeared to be on file.

Summary of Items of Concern:

1. Source Inspection Report number 00-123 pertaining to steel pile releases referenced MTRs, but no corresponding MTRs were found on file.
2. NCRs 7 and 11 have been outstanding for three months without resolution and without a clear indication as to why they have not been resolved.
3. It was found that QC inspector Joe Smith, who initially had a valid CWI, now has an expired certificate. Mr. Smith has been performing weld inspections for the past 3 months without a current certificate.

CONCLUSION

The audit concluded the following:

- **Document Control:** The document control process is not fully in compliance with the approved SIQMP. Material Test Reports were found to be missing from a number of release documents.

- **NCRs:** The NCR review and resolution process is not effective. The implementing agency has not addressed the root causes of the NCRs in order to prevent NCRs from reoccurring. Numerous NCR's have been repeated by the QC throughout the project.
- **Personnel certification:** The implementing agency needs to regularly check and enforce all certifications required, as stated in the approved SIQMP. Personnel lacking up-to-date certifications must not be allowed on the project.

RECOMMENDATION

Based on the Department QMA audit, the QA system showed deficiencies as stated above. The implementing agency is required to institute a plan of corrective action and to inform the Office of Quality Assurance and Source Inspection within 10 days following receipt of the audit letter.

If you have any questions, please call Oversight METS Representative John Doe at (916) 227-9999.

John Doe
Office of Quality Assurance and Source Inspection
Materials Engineering and Testing Service

17.14 Appendix 14: NDT Requirement Reference

NDT Requirement References

Fabricated Item	Standard Specification	Welding Code and Ref. Standard Spec.	Required NDT and Ref. Standard Spec.	Remarks Other Specification References
Structural Steel Bridge Members & Attachments	Sec. 11 and 55	AWS D1.5, Sec. 11-3 Weld QC Sec. 55-1.02B(7)	RT, UT, MT AWS D1.5, Sec. 6.7, Sec. 55-1.02B(7)	Fracture Critical Members AWS/AASHTO or AREMA Fracture Control Plan
Column Castings & Bridge Strengthening Steel	Sec. 55	AWS D1.5	None – Check Spec. Provisions	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Shear Connectors (Studs)	Sec. 55 and 75	AWS D1.5 Sec. 7	None	N/A
Misc. Steel, Br. Metal, & Restrainers	Sec. 75	AWS D1.1	None	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Steel H & Pipe Piles	Sec. 49-2.02	AWS D1.1	MT & UT for Tension Piles	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Overhead Sign Structures	Sec. 56-3.02L	AWS D1.1	RT or UT, MT AWS D1.1 56-3.01D(2)	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Field Welding CJP Welds Def. Bars, Spirals & Hoops	Sec. 52-6	AWS D1.4	RT – 25% of Joints Sec. 52-6.01D(4)(d)(ii)	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Shop Welding, CJP & ERW Column Reinforcement	Sec. 52-6	AWS D1.4 & Spec. Provisions	None Required for Shop Welds	Re: Sec. 11-3 of Std. Specs. Welding Quality Control
Bridge Railings	Sec. 83-1.02	AWS D1.1	None	N/A
Signal and Lighting	Sec. 86-2.04	AWS D1.1 and Spec. Provisions	None	Re: Sec. 11-3 of Std. Specs. Welding Quality Control

Note: For welding performed by an AISC Certified Intermediate Bridges Fabricator the Standard Specifications Sec. 11-3 Welding Quality Control may not apply in its entirety.

This table is not all encompassing of every NDT reference that may apply to a project.