Quality Assurance
For Local Agencies

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Caltrans IA Program

- Tester Qualification
- Laboratory Accreditation
  - District IA Staff
  - Local Assistance IA Staff under METS
- Reference Sample Program

http://www.dot.ca.gov/hq/esc/Translab/ofpm/IAP.htm
Reference Manuals

Caltrans Division of Local Assistance publications
Website: http://www.dot.ca.gov/hq/LocalPrograms/index.htm

Local Assistance Procedures Manual (LAPM) – Feb.10, 2009
Section 16.14:
Quality Assurance Program

Section 19:
Oversight and Process Review
Reference Manuals, cont.


This manual provides quality assurance guidelines for materials used in Federal-aid projects off the State Highway System.

APPROVED

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Note: Quality Assurance Programs should be reviewed and updated every five years or more frequently.
Local Assistance Procedures Manual
Chapter 16.14, “Quality Assurance Program”
- A sampling and testing program that will provide assurance that the materials and workmanship incorporated in each highway construction project are in conformance with the contract specifications
Local Assistance Procedures Manual
Chapter 19, “Oversight and Process Reviews”

- Oversight activities ensure that the implementation of the Federal Aid Highway Program is done in accordance with the applicable laws, regulations and policies.
QAP Manual

Consists of:

1 – An Acceptance Program
   • Frequency of testing
   • Test methods used (CT, ASTM, AASHTO)

2 – An Independent Assurance Program
   • On the SHS, CTM used --> CT IA Program
   • On the NHS, but off the SHS see QAP Section 5.0
Required for all Local Assistance projects
Signed by Registered Engineer/City Engineer
Update once every 5 years
To be included as part of project specifications
QAP Section 3.1 & 3.2

Guidelines on developing QAP

Section 3.1

• When local agencies use CT methods on a Federal-aid project, Caltrans can provide IA services (certification of samplers, testers and laboratories) for that Federal-aid project.
QAP Section 5.0

Developing an Independent Assurance (IA) Program

• For federal projects off the NHS:
  • Hire an outside qualified consultant to perform IA services
  • Have a qualified employee from within the local agency perform IA services
  • Request Caltrans provide IA services in CT methods are used
QAP Section 5.0

If the local agency has an in-house IA Program

- IA person must meet qualification of Section 5.1
- IA staff must remain INDEPENDENT from acceptance testing
  - Main function is to “test the acceptance tester”
- Certify personnel with organization
- Not valid for project outside IA’s agency jurisdiction
- IA person should be first certified in the test method used in certification; e.g. if ASTMs are used, IA person must be certified in ASTMs by recognized entity.
- Participate in a proficiency testing program
QA Checklist

Issue:
ARRA project review
- Inconsistent in project QA across the board
- Misinformation
- Interpret QAP in-correctly
- Lack of information
- Shortage of oversight personnel at local level
QA Checklist, cont.

Results:

• **Material Issues**
  • Material out of specification
  • May result in poor performance
  • Future maintenance burden for local agency

• **Funding**
  • Recommend to remove project funding by HQ Oversight Engineer or FHWA auditor (partial or entire amount)
QA Checklist, cont.

Solution:

- QA Checklist
- 1 page checklist
QA Checklist, cont.

**Project Engineering Phase Review**

1. Does the local agency have a copy of their QAP in the project records? (Y/N)

2. Has the QAP been reviewed by Caltrans Local Assistance IA?
QA Checklist, cont.

Sample of QAP that has been used by most if not all.

(Appendix Y of QAP for Use by Local Agencies)
QA Checklist, cont.

**Project Engineering Phase Review**

3. What specification is being used for this project? (Greenbook, Caltrans, etc.)

4. Who is performing acceptance testing for this project? (Indicate)
Project Engineering Phase Review

• 4a. Who is performing independent (quality) assurance testing, if applicable, i.e. local agency hires a third lab to check on lab doing acceptance testing

• 5. What test methods are being used? CTM ASTM AASHTO
QA Checklist, cont.

Project Engineering Phase Review

5a. If California Test Methods (CTMs) are used, are TL-0111 and TL-0113 presented?
QA Checklist, cont.

**TL-0113**

Caltrans Qualified Laboratory Inspection Report

Look for:
1. Location
2. Test Methods
3. Expiration
QA Checklist, cont.

TL-0111
Certificate Of Proficiency

Look for:
1. Name of Tester
2. Methods Certified
3. Expiration Date
QA Checklist, cont.

- QAP
- Spec.

- Test Methods
  - CTM
  - AASHTO/ASTM

- Independent Assurance
  - Done by Caltrans
  - 3rd Parties
QA Checklist, cont.

**Project Engineering Phase Review**

- 5b. If AASHTO or ASTM test methods are used, are current (copies of) laboratory's certification on file?
QA Checklist, cont.

AASHTO Certificate of Accreditation

American Association of State Highway and Transportation Officials
AASHTO Accreditation Program - Certificate of Accreditation

This is to signify that

Geocon West
Burbank, California

has demonstrated proficiency for the testing of construction materials
and has met the minimum requirements in AASHTO R18
set forth by the AASHTO Highway Subcommittee on Materials.

The scope of accreditation can be obtained by viewing
the AAP Directories of Accredited Laboratories (www.amrl.net)
or by contacting AMRL.

Executive Director
Chair, AASHTO Highway
Subcommittee on Materials
QA Checklist, cont.

AASHTO Accreditation Details

Look for:
1. Location
2. Test Methods
3. Expiration date 2 years after accredited.
QA Checklist, cont.

Army Corps of Engineers

Look for:
1. Location
2. Test Methods
3. Expiration date
QA Checklist, cont.

**Project Engineering Phase Review**

6. If CTMs are used, indicate Caltrans Independent Assurance staff who issued TL-0111 and TL-0113
QA Checklist, cont.

Project Engineering Phase Review

• 6a, If ASTMs or AASHTO are used, IA portion must follow QAP Manual for Use by Local Agencies, Section 5.0
QA Checklist, cont.

Project Engineering Phase Review

- 7. If ASTM or AASHTO are used, IA must be certified as well.
8. Info: If CTMs are used, a non Caltrans certified laboratory can be selected and get certified prior to the start of the project.
QA Checklist, cont.

**Becoming Caltrans Certified**

- LOCAL AGENCY
- REQUEST
- CT LOCAL IA ENG.
- SELECTED
- NON CERT. LAB
- CERTIFICATION
- CERTIFIED LAB

As quick as one month
As long as 6+ months
QA Checklist, cont.

Project Engineering Phase Review

9. Are copies of acceptance testing certifications (certification by IA) up-to-date and appropriate for the acceptance testing on this contract? (Y/N)

10. Does the QAP for this contract contain acceptance testing frequency tables? (Y/N)
11. (If 10 is Yes) - Have the frequency tables been modified from those in the Local Assistance sample QAP? (Y/N)

12. Local Agency may provide other local agency with Independent Assurance service as a contractor.
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