

#### **Clark County Building Department**

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James Gerren, P.E., Director/Building Official Werner Hellmer, P.E., Deputy Director · Scott Telford, P.E., Deputy Director

<b>Division:</b>	Engineering	Policy & Procedure:	TG-15-2023
Subject:	Quality Systems Manual	Effective Date:	11/15/2023
Code:	BAC 22.02.530 (A)	Revised Date:	07/01/2023

- **1.0 PURPOSE: BAC 22.02.530(A)** To perform quality assurance as set forth in the technical codes, an approved agency is a quality agency approved by the Building Official. The Building Official shall establish and enforce all applicable codes, rules, and regulations for approval. Rules and regulations for the quality systems manual shall be contained in technical guidelines.
- **2.0 SCOPE:** This guideline lists the information and forms that are required to be in the Quality Systems Manual (QSM). This guideline also states the minimum quality system requirements of the agency to ensure compliance with the Clark County Building Administrative Code (BAC) and Technical Guidelines (TG).

#### 3.0 ABBREVIATIONS & ACRONYMS:

**ASTM:** American Society for Testing and Materials **BAC:** Clark County Building Administrative Code

**CCBD:** Clark County Building Department

IA: Inspection Agency
QSM: Quality Systems Manual
TG: Technical Guideline

**4.0 DEFINITIONS:** For the purposes of this technical guideline, certain terms, phrases, words, and their derivatives shall be construed as specified in this section and the Building Administrative Code of Clark County.

**Quality Systems Manual:** A manual composed of a series of documents that contain policy statements, procedures, forms, reporting requirements, personnel qualifications, and statements of compliance with Clark County Codes and Standards. The QSM contains, outlines and/or references the procedural responsibilities to ensure the operations are completed, reviewed, and documented.

#### **5.0 REFERENCES:**

**ASTM E 329:** Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

**ASTM E 543:** Standard Specification for Agencies Performing Nondestructive Testing International Standards Organization (ISO)

**ISO/IEC 17020:** General criteria for the operation of various types of bodies performing inspection

ISO/IEC/EN 17025: General Requirements for the Competence of Calibration and Testing Laboratories

ASTM E 548: Standard Guide for General Criteria Used for Evaluating Laboratory Competence

Southern Nevada Building Code Amendments

Technical Guideline 16

Technical Guideline 17

#### **6.0 RESPONSIBILITIES:**

- 6.1 **Inspection Agency:** 
  - 6.1.1 An inspection agency seeking approval status must submit a QSM and approval request to CCBD, for review
    - A QSM shall be prepared in accordance with Section 7.0 of this TG.
    - The QSM shall be approved in writing by the quality control manager and the engineering manager.

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#### 6.2 Clark County Building Department

6.2.1 CCBD personnel shall review the agency QSM for compliance with this document.

#### 7.0 PROCEDURE:

- 7.1 The QSM shall be prepared in accordance with ASTM E 329, ASTM E 543, and ASTM E 548. Firms accredited in accordance with ISO standards 17020 and 17025, meet the intent of ASTM E 329, ASTM E 543, and ASTM E 548.
- 7.2 The QAA engaged in inspection services shall prepare a QSM as specified herein:
  - 7.2.1 The agency shall provide a title sheet with the agencies contact information, manual issuance date, and revision history dates after issuance.
  - 7.2.2 The agency shall provide a table of contents, with the sections 7.2.3 through 7.2.9 identified.

#### 7.2.3 **Organization of the Agency:**

- Description of the organization including complete legal name and address. The name shall be as shown on the Clark County Business License
- Incorporation documents.
- All QAA branch offices, principal officers, and offices directors, shall be included when approval is sought for additional office locations.
- External organizations, organizational components, and functions utilized for significant supporting technical services shall also be included.

#### 7.2.4 **Organization History:**

• A brief history of the agency, and a general description of the organization's service types of users, shall be provided.

#### 7.2.5 **Organization Charts and Functions:**

 A functional description of the agency's organizational structure, operational departments, support departments, and services shall be included in the form of chart. Lines of responsibility, authority, and supervisory accountability must be clearly detailed.

#### 7.2.6 **Agency Human Resources:**

- Minimum personnel qualifications contained in the QSM shall be in accordance and comply with TG-17
- In-house training program in Appendix A that requires at a minimum quarterly education to ensure the continued competence of its personnel.
  - The quarterly training will contain ethics training, TG review, code and standard review, and general inspection topics.
- Agency conflict of interest policy.
- Personnel conflict of interest policy.

#### 7.2.7 **Technical Services:**

- Technical Services Acknowledgment, form 862.
- Calibration Program & Testing Methods Acknowledgment, form 863.
- Final report certificate of compliance templates, form 843 & 844, shall not be altered and shall be in compliance with the requirements of TG-50.
- Final commissioning report certificate of compliance templates, form 845, shall not be altered, and shall be in compliance with the requirements of TG-92.
- Inspection forms shall not be altered and shall be in compliance with the requirements of TG-50, TRG-Daily, TG-92, and TG-95.

#### 7.2.8 Material Resources of the Agency:

- Calibration and testing program for all field and laboratory equipment.
- A list of building codes and standards that are accessible to all personnel, via as digital or printed versions, and are permanently located at the approved agency office.

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#### 7.2.9 **Audit Forms:**

- The auditor(s) shall document audit findings if when issues are identified.
  - The approved agency's Quality Control Manager, Engineering Manager, and agency's management shall recommend appropriate corrective actions.
  - The Engineering Manager shall ensure that the agency implements recommended corrective actions.

#### • Internal Project Audit

- o Internal Project Audit form in Appendix B, is required to be in the QSM. The auditor must perform an in-depth field audit of two projects per year.
- o Provide photos for the validity of field audit(s) performance.
- Provide an internal project audit summary form.

#### • Internal Approved Personnel Audit

- o Internal Approved Personnel Audit form in Appendix C, is required to be in the QSM. This audit must be performed on a semi-annually basis.
- Provide an inspector audit summary form.

#### • Internal Office Audit

 Internal Office Audit form in Appendix D, is required to be in the QSM. This audit is required on an annual basis and must be performed during the last quarter of the agency's annual renewal period.

#### **8.0 RECORDS:**

#### 8.1 **CCBD**

• Clark County Building Department adheres to the Clark County record retention program, managed by the Records Division.

#### 8.2 **Approved Agency**

• The Approved Agency shall retain copies of all reports, audits, and data, which shall be available to CCBD when requested or audited.

#### 9.0 ATTACHMENTS:

**Appendix A** In-house Training Record

Appendix B Internal Project Audit

**Appendix C** Internal Approved Personnel Audit

**Appendix D** Internal Office Audit

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Prepared By: Agatha Lallana	Date Prepared: July 2023	
Revision History:		
Title	Revision/Approved Date	Effective Date
TG-15-2023	July 1, 2023	November 15, 2023
TG-15-2018	December 12, 2018	December 12, 2018
TG-15-2014	October 10, 2014	November 1, 2014
TG-15-2011	June 17, 2011	July 1, 2011
TG-15-2009	April 17, 2009	April 24, 2009
TG -15-2007	August 31, 2007	September 14, 2007
TG -15-2004	November 16, 2004	November 18, 2004
TG -15-2000	December 26, 2000	January 31, 2001
Reviewed by:		
Matthew Brewer  Manager of Inspections	Zach Gharibian  Zach Gharibian  Manager of ACET	Terry Kozlowski Terry Kozlowski Manager of Plans Exam
Shannan McEwen Shannon McEwen Manager Building Permits	<u>Jake Mizrahi</u> Jake Mizrahi, P.E. Manager of Engineering	
Werner Hellmer Werner Hellmer, P.E. C.B.O	Scott Telford, P.E. C.B.O	
Deputy Director	Deputy Director	
Approved by:		

<u>James Gerren</u> James Gerren, P.E. C.B.O Director/Building Official

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# **APPENDIX A**

(TG-15)

**In-house Training Records** 

### **In-house Training Record**

Approved Agency Name:
Annual Renewal Date:
In-house Training Number (One through Four):
In-house Training Date:
In-house Training Performed by:
In-house Training Topics:
The in-house training was performed pursuant to the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.
I,, the Quality Control Manager, has supervised and documented this in-house training.
Signature of the Quality Control Manager
I,, the Engineering Manager, has directed and reviewed this in-house training. Content of the training complies with referenced documents.
Signature of the Engineering Manager

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## **List of Attendees**

Date		
11214		

NAME	SIGNATURE

Signature of Trainer \_\_\_\_\_

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## **APPENDIX B**

(TG-15)

**Internal Project Audit** 

Internal Project Audit Results
Approved Agency Name:
Annual Renewal Date:
Audit Number (One or Two):
Inspection Areas of Inspection for Permit (i.e. Concrete, Masonry, Smoke Control):
Inspection Items Audited:
Stage/Status of Project (i.e. Grading, Foundation, Framing, Exterior Walls):
Permit Number:
First Inspection Date:
Most Recent Inspection Date:
Audit Date:
Audit Performed by:
Number of Photos:
The Audit was performed to verify compliance with the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.
I,, the Quality Control Manager, has supervised and documented this audit.
Signature of the Quality Control Manager
I,, the Engineering Manager, has directed and reviewed this audit. All corrective actions were undertaken.
Signature of the Engineering Manager

performed at	the time of the field autials	idit.	inspection categories being		
	el Name:	Certification	Exp. Date		
Approved Personnel Name:			Exp. Date		
Approved Personn	el Name:	Certification	Exp. Date		
Approved Personnel Name:		Certification	_		
<b>Approved Personn</b>	el Name:	Certification	Exp. Date		
<b>Approved Personn</b>	el Name:	Certification	_		
Approved Personn	el Name:	Certification	Exp. Date		
Comments					
Deficiencies Noted					
Recommended					
Corrective Actions Corrective Actions					
Undertaken					
<ul> <li>In speaking with the approved personnel, they have verified that the permit covers the work in progress.</li> <li>Auditor Initials Approved Personnel Name:</li> </ul>					
3.0 The approved personnel has notified CCBD of commencement of inspection of a job through filing a project start up form.  Auditor Initials Date of Startup Form					
4.0 The approved personnel has notified CCBD within one business day when the work does not have a permit or exceeds the scope of an active permit.  Auditor Initials					
Comments					
Deficiencies Noted					
Recommended					
Corrective Actions					
Corrective Actions					
∪ndertaken	Undertaken				

5.0 Unless otherwise approved by the Building Official or provided in the technical codes, the approved personnel is providing inspection on a continuous basis.  Auditor Initials				
Comments				
Deficiencies Noted				
Recommended Corrective Actions				
Corrective Actions				
Undertaken				
documents, p	d personnel is inspecting the clarification of the	ne work for conformance with approved construction ing documents.		
	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Approved Personne	el Name:	Plan Sheets Used by Approved Personnel		
Comments				
Deficiencies Noted				
Recommended				
Corrective Actions				
Corrective Actions Undertaken				
Corrective Actions Undertaken  7.0 The approve carry the CC	d personnel is not utilizir BD approval mark except a	ng construction documents for acceptance that do not as an aid to inspection.		
Corrective Actions Undertaken  7.0 The approve carry the CC	BD approval mark except			
Corrective Actions Undertaken  7.0 The approve carry the CC Auditor Init	BD approval mark except			
Corrective Actions Undertaken  7.0 The approve carry the CC Auditor Init  Comments  Deficiencies Noted  Recommended	BD approval mark except			
Corrective Actions Undertaken  7.0 The approve carry the CC Auditor Init  Comments  Deficiencies Noted	BD approval mark except			

8.0	The approved personnel is maintaining inspection reports, testing results and other project documents in the project field file.  Auditor Initials			
9.0	Daily reports are legible and signed by the approved personnel performing the work. <b>Auditor Initials</b>			
10.0	• •	ne Inspection Repor	e technical guidelines and the technical guidelines and the technical guidelines and the	e technical codes. Numbered and
Appro			Report #	Report Date
Appro	ved Personno	el Name:	Report #	Report Date
Appro	ved Personno	el Name:	Report #	Report Date
Appro	ved Personne	el Name:	Report #	Report Date
Appro	ved Personne	el Name:	Report #	Report Date
Appro	ved Personne	el Name:	Report #	Report Date
C	omments			
Defici	encies Noted			
	ommended			
Corrective Actions  Corrective Actions				
Undertaken				
Nonconforming items not resolved the same day, or about to be incorporated in the work, were recorded in a non-compliance report.  Auditor Initials				
	NCR #			
12.0 The approved personnel is maintaining a log of non-compliance reports and corrections in the project field file. Numbered and ordered per the Inspection Report Designation System.  Auditor Initials				
C	omments			
Defici	encies Noted			
	ommended			
	ctive Actions			
	ctive Actions dertaken			

13.0 Original signature is provided on the daily reports per the te codes.	chnical guidelines and technical
Auditor Initials	
Comments	
Comments	
Deficiencies Noted	
Recommended	
Corrective Actions Corrective Actions	
Undertaken	
Comments (if neede	<b>d</b> )

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## **Field Audit Photos**

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## **APPENDIX C**

(TG-15)

**Internal Approved Personnel Audit** 

## **Internal Approved Personnel Audit**

Approved Agency Name:
Annual Renewal Date:
Audit Number:
Inspector Audited:
Permit Number:
Daily Report:
Audit Date:
Audit Performed by:
The Audit was performed to verify compliance with the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.
I,, the Quality Control
Manager, has supervised and documented this audit.
Signature of the Quality Control Manager
I,, the Engineering Manager, has directed and reviewed this audit. All corrective actions were undertaken.
Signature of the Engineering Manager

the time of the audit.						
		Expiration Date				
Comments						
Deficiencies Noted						
Recommended Corrective Actions						
Corrective Actions Undertaken						
filing a projec	2.0 The approved personnel has notified CCBD of commencement of inspection of a job through filing a project start up form.  Auditor Initials Date of Startup Form					
3.0 The approved <b>Auditor Init</b>	d personnel has verified that the perm	it covers the work in progress.				
have a permit						
Comments						
Deficiencies Noted						
Recommended Corrective Actions						
Corrective Actions Undertaken						
Unless otherwise approved by the Building Official or provided in the technical codes, the approved personnel is providing inspection on a continuous basis.  Auditor Initials						
Comments						
Deficiencies Noted						
Recommended Corrective Actions						
Corrective Actions Undertaken						

	d personnel is inspecting the work for conformance with approved construction plan revisions, and supporting documents.
	ials Plan Sheets Used by Inspector
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	
carry the CC	d personnel is not utilizing construction documents for acceptance that do not BD approval mark except as an aid to inspection.  ials
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	
• -	are legible and signed by the approved personnel performing the work.  ials
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions	

9.0 The daily reports comply with the technical guidelines and the technical codes. Numbered and ordered per the Inspection Report Designation System.		
	ials TRG's Used	
Comments		
Deficiencies Noted		
Recommended Corrective Actions		
Corrective Actions		
were recorde	ing items not resolved the same day, or about to be incorporated in the work, d in a non-compliance report.  ials NCR #	
Comments		
Deficiencies Noted		
Recommended Corrective Actions		
Corrective Actions Undertaken		
11.0 The approved personnel is maintaining a log of non-compliance reports and corrections in the project field file.  Auditor Initials		
12.0 Record of Correction Reports are generated as required by the approved personnel. approved personnel have attached the approved structural revision including any sketch, detail, engineering analysis, and calculations approved by CCBD that were needed to clear the non-compliance report.  **Auditor Initials**		
13.0 The approved personnel is maintaining inspection reports, testing results and other project documents in the project field file.  Auditor Initials		
Comments		
Deficiencies Noted		
Recommended		
Corrective Actions		
Corrective Actions Undertaken		
Ondertaken		

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codes.	iature is provided on the daily reports per the technical guidelines and technical
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	
	Comments (if needed)

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## **APPENDIX D**

(TG-15)

Internal Office Audit

### **Internal Office Audit**

Approved Agency Name:
Annual Renewal Date:
Audit Date:
The Audit was performed to verify compliance with the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.
I,, the Quality Control Manager, has supervised and documented this audit.
Signature of the Quality Control Manager
I,, the Engineering Manager, has directed and reviewed this audit. All corrective actions were undertaken.
Signature of the Engineering Manager

1.0	Quality 1.1	Systems Manual Version of Quality Systems Manual (QSM) being used by this agency is approved by CCBD. Current QSM in use by the agency:	
		Revision Number Date	
	1.2	Approved QSM has been reviewed for this annual renewal period and found to be current and suitable for the type and scope of the agency's approved services.	
		EM Initials	
	1.3	QSM revisions may be triggered by organizational changes, changes in the facility and equipment used during the performance of special inspection activities, new code cycle, etc.	
		QSM Revision Required? (Y/N)	
		If yes, was the revised QSM submitted to CCBD.? (Y/N)	
	Comment		
Defi	iciencies N	oted	
	ecommend rective Ac		
	rective Ac		
1	Undertake		
2.0 Approval by CCBD		al by CCBD	
	2.1	Approved agency only performs special inspection services for which it is approved.	
		EM Initials	
	2.2	Agency staffs project with Clark County approved personnel.	
		EM Initials	
	2.3	Agency has submitted required annual renewal Information.	
		EM Initials	
	2.4	Agency has submitted required annual renewal fees.	
		EM Initials	
	Comments		
Defi	iciencies N	oted	
Re	ecommend	ed ed	
<b>——</b>	rective Ac		
	Undertake		
3.0	Quality 3.1	Management and Responsibilities The agency has employed a Quality Control Manager (QM) on a continuous basis.	
		EM Initials	
	3.2	The agency has notified CCBD of any changes in the designated QM.	
		EM Initials	

3.3

		QA Q	SM, the BAC, project requirements, and technical codes.		
EM 1		EM In	nitials		
3.4		In-house training of personnel has been performed every quarter.			
		EM Ir	EM Initials		
	3.5	agency	ise training included administrative provisions related to inspection activities in the y's QSM, the Technical Guidelines, and the Building Administrative Code, and cal provisions in the technical codes.		
		EM Ir	nitials		
	3.6	Copies	s of the latest CCBD Technical Guidelines have been distributed to agency's approved anel.		
		EM Initials			
	3.7	_	M has performed audits of inspection activities prior to it being covered or incorporated ne work.		
		EM In	nitials		
3.8		The QM or the designated auditor has performed an audit of all approved personnel on a semi-annual basis per TG-15.			
		EM Initials			
	3.9	The personnel audit summary report is up to date.			
		EM Initials			
3.10		Additional in-house training was undertaken based on internal audit results, enforcement actions issued by CCBD staff, mandatory meeting results documented by CCBD, and/or outcome of an administrative hearing.			
		EM In	nitials		
(	Comment	ES			
Defic	ciencies N	Noted			
	commend ective Ac				
Corrective Actions Undertaken		ctions			
4.0 Engin 4.1			Management and Responsibilities oproved agency has employed and Engineering Manager (EM) on a continuous basis.		
		EM In	EM Initials		
	4.2	The ap	oproved agency has notified CCBD of any changes in the designated EM.		
		EM Initials			
	4.3	The E	M has supervised and performed a review that:		
		4.3.1	The approved agency has complied with policies and procedures in the agency's QSM.		
			FM Initials		

The QM has reviewed the reports generated by the inspection process in accordance with the

	4.3.2	Approved personnel are inspecting the work performed and verifying that it is within the scope of the permit.
		EM Initials
	4.3.3	Approved personnel are being correctly assigned to projects.
		EM Initials
	4.3.4	The inspection process is accredited through participation in AMRL, CCRL, A2LA, LAB, NAVLAP, ISO, or IAS. (Circle all that apply)
		EM Initials
4.4	The E	M has supervised the submittal of all required reports:
	EM I	nitials
4.5	Two preview	projects have been field audited in depth, with the photo documentation and paperwork yed.
	EM I	nitials Permit Number of Projects
4.6	All eq	uipment that is in use by the approved personnel are calibrated or placed out of service.
	EM I	nitials
Comme	nts	
Deficiencies	Noted	
Recomme	nded	
Corrective A		
Undertak		
5.0 Repo	utin a	
5.0 Repo		reports are generated as required by approved personnel.
	EM I	nitial
5.2	Non-c	ompliance reports are generated as required by approved personnel.
	EM I	nitial
5.3	CCBE	Is notified of the issuance of non-compliance reports as required.
	EM I	nitial
5.4		gency has submitted required reports to CCBD as required in the Technical Guidelines e BAC.
	EM I	nitial
Comme	nts	
Deficiencies	Noted	
Recommen		
Corrective A		
Undertaken		

6.1 A <sub>1</sub>	at of Approved Personnel on Clark County projects were approved by CCBD at the time assignment.		
E	/I Initial		
	proved personnel assigned on Clark County projects are trained and experienced in the rformance of required inspection activities.		
El	/I Initial		
Comments			
Deficiencies Note	d		
Recommended Corrective Action	s		
Corrective Action Undertaken	S		
	•		
(Y	/N)		
E	// Initial (If yes, complete the following.)		
7.	.1 Number of enforcement actions issued to approved agency this renewal period.		
7.	2 The EM and QM have reviewed the enforcement actions. (Y/N)		
7.	.3 The agency has submitted required written responses. (Y/N)		
7.	.4 The agency has paid all assessed administrative fees. (Y/N)		
	EM Initial		
Comments			
Deficiencies Note	d		
Recommended Corrective Action	s		
Corrective Action Undertaken			

8.1 The ap	Inspection (Subcontractor approved agency only) pproved agency has not subcontracted any item of the designated inspection category to agencies.
EM I	nitial
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	
	pproved agency has coordinated the work of the subcontractor approved agency.
9.2 The a	pproved agency notified the Building Official for each instance of subcontracting activities.
EM I	nitial
Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	
	Comments (if needed)