

Roofing QA/QC Manual Sample Selected pages (not a complete plan)

- Quality Manual
- Reporting Forms
- Inspection Forms

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[CompanyName]

[CompanyAddress] [CompanyPhone2]

Roofing

Quality Manual

Operating Policies of the [CompanyName] Quality System

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5. PROJECT-SPECIFIC QUALITY STANDARDS

APPLICABLE REGULATIONS, INDUSTRY, and COMPANY STANDARDS

5.1. OVERVIEW

[CompanyName] personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.

To achieve expectations reliably and consistently, specifications are clearly spelled out, not only for results but also for processes. Specifications apply to materials, work steps, qualified personnel and subcontractors and suppliers, safe work rules, and environmental work conditions.

Standards ensure that results are specified rather than left to discretionary practices.

5.2. REGULATORY CODES

All [CompanyName] construction activities comply with the relevant regulations. The Quality Manager identifies regulatory requirements applicable to the jurisdictions served, including:

- Applicable Federal regulations
- Applicable State regulations
- Applicable building codes and local addenda to building codes
- Applicable Fire Code
- Applicable Fuel and Gas Code
- Applicable Mechanical Code
- Applicable Plumbing Code
- Additional regulations specified by the customer contract

The Quality Manager identifies regulatory requirements that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

The Superintendent had jobsite access to relevant codes and government regulations.

5.3. INDUSTRY QUALITY STANDARDS

All [CompanyName] construction activities comply with generally accepted good workmanship practices and industry standards.

The Quality Manager identifies supplemental requirements for industry standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan when it is not otherwise specified by the contract, contract technical specifications, or approved drawings.

Regulatory Codes and Industry Standards							
Division	Description	Reference Standard No.	Reference Standard Title				
7	Use of coal-tar pitch materials	29 CFR 1926	Safety and Health Regulations for Construction				
7	Minimum clearance around masonry chimneys or masonry enclosing a flue	NFPA 211	Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances				
7	Minimum clearance around vents and vent connectors	NFPA 211	Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances				
7	Applying roofing materials to steep- slope roofs	NRCA 0418	Steep-slope Roof System Manual				
7	Fabrication of flashing and trim	SMACNA 1793	Architectural Sheet Metal Manual				
7	Anchoring metal roof panels	NRCA 0409	Architectural Sheet Metal and Metal Roofing Manual				
7	Anchoring metal wall panels	MBMA MBSM	Metal Building Systems Manual				
7	Installation of roof membrane systems	NRCA 0405	Roofing and Waterproofing Manual				

5.4. MATERIAL AND EQUIPMENT SPECIFICATIONS

The Quality Manager ensures that all types of materials and equipment that affect quality are identified and controlled.

The Quality Manager evaluates the expected use of materials and equipment and identifies types of materials and equipment that may affect project quality. For each item, the Quality Manager sets specifications for their intended use, including:

- Compliance to contract requirements
- Compliance to code and industry standards and listing requirements
- Structural integrity
- Performance
- Durability
- Appearance
- Product identification for traceability.

The Quality Manager identifies controlled material and equipment that apply to the project.

The Quality Manager ensures that purchase orders for listed materials and equipment include the relevant specifications as specified in section 6.7 Purchase Order Requirements.

Only approved materials are used in the construction process.

5.5. WORK PROCESS SPECIFICATIONS

The Quality Manager ensures that work processes are controlled to ensure that the specified requirements are met. When appropriate, the Quality Manager will specify project quality standards for work processes that may include:

- References to documented procedures such as manufacturer's installation instructions
- Procedures for carrying out process steps
- Methods to monitor and control processes and characteristics
- Acceptability criteria for workmanship
- Tools, techniques and methods to be used to achieve the specified requirements.

5.6. CONTROLLED MATERIAL IDENTIFICATION AND TRACEABILITY

The Quality Manager determines types of project materials that require quality controls.

For each type of quality controlled material, the Quality Manager determines lot control traceability requirements, if any, and specifies the means of lot identification. Identification methods may include physical labels, tags, markings and/or attached certification documents.

When lot controlled materials are received, the Superintendent verifies that materials have the specified lot identifications.

The Superintendent maintains lot identification at all production phases from receipt, through production, installation, or assembly, to final completion. Acceptable methods for preserving lot identification include physically preserving observable lot identifications, recording the lot identification on a work task quality inspection form or other work record, or collecting the physical lot identifier as a record along with supplemented with location.

If lot controlled materials are without lot identification, the Superintendent deems the materials as nonconforming and segregates them and/or clearly marks them to prevent inadvertent use. The Superintendent treats the material according to the company policy for nonconformances. Only the Quality Manager can re-identify or re-certify the materials.

5.7. MEASURING DEVICE CONTROL AND CALIBRATION

The Quality Manager evaluates the project requirements and determines if there are measuring devices that require controls to assure quality results.

For each type of device the Quality Manager identifies:

- Restrictions for selection
- Limitations on use.
- Calibration requirements including the frequency of calibration. All calibrations must be traceable to national measurement standards.

When a measurement device is found not to conform to operating tolerances, the Quality Manager validates the accuracy of previous measurements.

5.8. [COMPANYNAME] QUALITY STANDARDS

[CompanyName] quality standards supplement contract requirements when they are necessary to ensure quality.

The Quality Manager identifies supplemental requirements for [CompanyName] Quality standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

When [CompanyName] quality standards differ from industry standards or product manufacturer instructions, the Quality Manager justifies that the standard reliably achieves quality results and then documents the justification.

All [CompanyName] construction activities conform to the company quality standards.

5.9. APPLICATION OF MULTIPLE SOURCES OF SPECIFICATIONS

Should multiple sources of specifications apply to a work task, the higher level of specification applies. When there are equal levels of specifications that conflict, the specifications are applied in this order:

- Submittals approved by the customer
- Contract technical specifications
- Contract drawings
- Government regulations that exceed requirements of items below

selecter

- [CompanyName] quality specifications, including subcontract specifications
- [CompanyName] Quality Manual
- Product installation instructions
- Industry standards
- Generally accepted practices

Should multiple sources of conflicting specifications apply to a project, the Quality Manager defines the standards that apply to the specific project on the Project Quality Assurance/Quality Control Plan.

7. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

7.1. OVERVIEW

The construction process plan defines how project work is to be done and approved for the overall project. The construction process plan is communicated to all key personnel, subcontractors and suppliers in a startup meeting. As the project proceeds, work task plans provide additional details of how each individual work task is carried out. Work tasks planning meetings are used to communicate expectations of the work task plan to key personnel responsible for carrying out the work task.

7.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from [CompanyName], subcontractors and suppliers meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Quality Assurance/Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements
- Project organization chart and job responsibilities
- Methods of communication and contact information
- Location of project documents and records

7.3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

7.3.1. WORK TASK REQUIREMENTS REVIEW

In preparation for the start of an upcoming work task, the Superintendent reviews an integrated and coordinated set of documents that collectively define quality requirements for the work task including:

- Objectives and acceptance criteria of the work task
- Quality standards that apply to the work task
- Work instructions, process steps, and product installation instructions that apply to the work task
- Shop drawings
- Submittals
- Tools and equipment necessary to perform the work
- License, certification, or other qualification requirements of personnel assigned to work
- Required records of the process and resulting product
- The subcontractor contracted to perform the work, if applicable
- Customer contract requirements
- Required quality inspections and tests
- Method for clearly marking nonconformances to prevent inadvertent use
- Location of quality system records and documents
- Personnel training

7.3.2. PREPARATORY SITE INSPECTION

The Superintendent also performs a quality inspection of the work area and:

- Assesses completion of required prior work
- Verifies field measurements
- Assures availability and receiving quality inspection status of required materials
- Identifies any nonconformances to the requirements for the work task to begin
- Identifies potential problems

7.3.3. WORK TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a work task, the Superintendent conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a work task quality plan meeting include:

- Conflicts that need resolution
- Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the work task
- Record keeping requirements and the availability of necessary forms
- Review methods and sequences of installation
- Special details and conditions
- Standards of workmanship
- Heightened awareness of critical quality requirements
- Quality risks
- Work tasks quality inspection form

7.4. WEEKLY QUALITY PLANNING AND COORDINATION MEETINGS

The Superintendent conducts a meeting with key company, subcontractor and supplier personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

The meeting is held on a nominal weekly schedule. During the meeting, the Superintendent facilitates coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements.

The Superintendent maintains a record of the meeting event on the Daily Quality Control Report.

7.5. PROCESS CONTROL STANDARDS

7.5.1. JOB-READY START WORK STANDARDS

Work on a work task starts only when conditions do not adversely impact quality, comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental start-work requirements that apply to a specific project when they are necessary to assure quality results.

7.5.2. WORK IN PROCESS STANDARDS

Work is conducted only when conditions do not adversely impact quality; comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental work in process requirements that apply to a specific project when they are necessary to assure quality results.

7.5.3. PROTECTION OF COMPLETED WORK STANDARDS

[CompanyName] will preserve and protect work in process, completed work, component parts, materials, and when applicable, delivery to the destination so as to maintain so that compliance with project requirements and standards. This includes handling, storage, protection from natural elements, and reducing risks of damage.

Completed work is protected from damage as specified by government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental protection requirements that apply to a specific project when they are necessary to assure quality results.

7.5.4. MATERIAL STORAGE

The Superintendent ensures all materials will be delivered, stored and handled in a manner that protects them from damage, moisture, dirt and intrusion of foreign materials.

Delivery of materials will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

The Superintendent surveys stored materials during daily jobsite reviews and identifies any material that have incurred damage or otherwise become defective and therefore unfit for use.

7.5.5. CONTROLLED USE OF MATERIALS

The Project Manager ensures that contracts and purchase orders are awarded only to outside organizations qualified to perform the work task and/or supply materials as required for the specific project.

Only approved materials are used in the construction process. Only approved materials are specified in purchase and/or subcontracts.

Materials that are defective, deteriorated, damaged, or not approved are not used. The Superintendent clearly marks such materials for non-use or otherwise holds them aside.

When customer-supplied materials are lost, damaged, or otherwise found unsuitable for use, the Superintendent reports such findings to the customer.

When subcontractor–supplied materials are damaged or otherwise found unsuitable for use, the Superintendent reports such findings to the subcontractor.

The Superintendent ensures that construction uses only materials specified in the contract technical specifications, contract drawings, and approved submittals. Substitutions are made only by agreement of the customer and documented by a change order (see section 2.1.3.6).

7.5.6. CONTROLLED PRODUCT USE AND INSTALLATION

[CompanyName] construction activities conform to manufacturers' product use and installation instructions that apply to the construction process.

When installing a product, the Superintendent has access to all applicable product installation instructions.

7.6. DAILY QUALITY CONTROL REPORT

The Superintendent records a summary of daily work activities. The report will include:

- Schedule Activities Completed
- General description of work activities in progress.
- Problems encountered, actions taken, problems, and delays
- Meetings held, participants, and decisions made
- Subcontractor and Supplier and Company Crews on site
- Visitors and purpose
- General Remarks
- Improvement Ideas
- Weather conditions

7.7. MONTHLY QUALITY CONTROL REPORT

When a monthly quality control report is required by the Project Quality Plan, the Superintendent records a monthly status report. The report includes:

- A summary of work completed and work in progress
- Outstanding issues
- Issues resolved during the reporting period
- Outstanding potential change orders
- Project status with current project costs and estimated completion date
- A cost analysis summarizing actual costs to date and estimated future costs
- Project pictures as appropriate

14. Forms

[CompanyName] Point of Contact List	. 53
[CompanyName] Project Quality Communications Plan	. 54
[CompanyName] Project Subcontractor and Supplier List	. 56
[CompanyName] Quality Inspection and Test Plan	. 57
[CompanyName] Quality Controlled Work Task List	. 58
[CompanyName] Daily Production Report	. 59
[CompanyName] Work Task Work Order Form	. 60
[CompanyName] Work Task Inspection Form	1
[CompanyName] Punch List	2
[CompanyName] Nonconformance Report	3
[CompanyName] Controlled Materials Form	4
[CompanyName] Material Inspection and Receiving Report	5
[CompanyName] Project Quality System Audit Form	

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	[CompanyName] Quality Inspection and Test Plan									
Project ID			Project Name					PROJECTOR	PROJECTOR	
[ProjectNumber]			[ProjectName]				S	[CompanyName]		
SPECIFICATION SECTION AND PARAGRAPH NUMBER	SCHEDULE ACTIVITY ID	TEST REQUIRED	ACCREDITED/ APPROVED LAB YES /NO	SAMPLED BY	TESTED BY	LOCATION OF TEST ON/OFF SITE/SITE	DATE COMPLETED	DATE FORWARDED TO CUSTOMER	REMARKS	
				0	0					
				XC						
				0						
			5							

[CompanyName] Daily Production Report										
Project ID	Project Name	Preparer*/Date								
[ProjectNumber]	[ProjectName]									
	* On behalf of the Projector, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the Project drawings and specifications to the best of my knowledge except as noted in this report.									
		Description								
Job-ready and WIP Inspections (Active work tasks)		6								
Work Tasks Completion Inspections										
Sampling/Tests Performed										
Nonconformance Reports										
Problems encountered, actions taken, problems, and delays		0								
On Site Subcontractors and Suppliers, Company Crews, and Visitors										
Meetings held and decisions made	0)								
General Remarks and improvement ideas	- 0									
Weather conditions										
	Temperature: Low: Precipitation: D No D	F High:F Yes, type and amount:								

		[CompanyN Punch Li	ame] st			
P	roject ID	Project Name		Pur	ich List Type	
[ProjectNu	mber]	[ProjectName]	Work Tas	sk:		
Insp	ection Date	Preparer		or Punch List		
				Customer Inse		
					Item Completion Verification	
Item	Location	Description	Due Date	Compl. Date	Super Initial	QA Initial
				(6	
				0		
			06			
	unch List pletion Date	Final QA Sign-off	Remaining Nonconformances ID # and Description			

		1	[Cor] Material Inspecti	npanyNar on and Re		Report			
				Version 20150128					
Contract ID	Contrac	t Name	Purchase Order No.		Supplier		Bill of La	ading No.	Date
[ProjectNumber]	[Project	Name]				6			
ltem No.	Stock/Part No.	C	Description	Quantity Received	Condition	Marking	Accept	Conditional Use	Reject
					501				
				20					
			×	Ø					
			Receiv	ing Quality Co	ntrol				
Conform to cont	een accepted by me or ract specifications EXCE rrent good condition EX zed person and date: _	EPT as noted herein or CEPT as noted	on supporting documents.						

LIST OF INCLUDED INSPECTION FORMS

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THERMAL AND MOISTURE PROTECTION

- Flashing and Sheet Metal
- Joint Protection
- Membrane Roofing
- Roof Accessories
- Roof and Deck Insulation
- Roof Panels
- Roof Tiles
- selecteorac • Roofing and Siding Panels
- Sheet Metal Roofing
- Shingles and Shakes

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oject: Phase:	Contract#:	Subcontractor:	Crew:				
Compliance Verification Compliance with initial job-ready requirements Compliance with material inspection and tests Compliance with work in process first article inspection requirements Compliance with work in process first article inspection requirements	Image: Second state Image: Second state Image: Second state Image: Second state <td>htened Awareness Checkpoints f size and gauge: per specifica and valleys: exposure per pl ps and joints: tightly fitting/ con ners; correct type/ heads flus s: straight/ proper radius/ no co ets: cut depth/ flashing penetra sures: walls and valleys corre amage/ corrosion or sharp edg</td> <td>ations ans rrect width and direction h/ not overdriven cracking ation and seal per plans ct per plans</td>	htened Awareness Checkpoints f size and gauge: per specifica and valleys: exposure per pl ps and joints: tightly fitting/ con ners; correct type/ heads flus s: straight/ proper radius/ no co ets: cut depth/ flashing penetra sures: walls and valleys corre amage/ corrosion or sharp edg	ations ans rrect width and direction h/ not overdriven cracking ation and seal per plans ct per plans				
 Compliance with Task completion inspection requirements Compliance with inspection and test plan Compliance with safety policies and procedures eported Nonconformances and incomplete items: 		Contact Caulks and mastics: per plans and specifications (if any)					
FTQ Scores ield Mgmt91.45.01 auality 5 4 3 2 1 Notes: on-Time 5 4 3 2 1 Notes: afety 5 4 3 2 1 Notes:	s and Completion	Sign-off					
gn and date*: Cell # / ID #:: sk has been has been verified complete and in compliance with contract drawings and spec Quality Score 5 = 100% NO problems 4 = 1 minor problem		ces a n d incomplete items reported above.	1 = Excessive problems				



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