

www.firsttimequalityplans.com

# [CompanyName]

# Construction Quality Assurance/Quality Control Plan

[ProjectName] [ProjectNumber]

# Management acceptance

This Construction Quality Assurance/Quality Control Plan has been reviewed and accepted.

Endorsed By: (Name / Title)	[QualityManagerName], Quality Manager			
Signature:	[QualityManagerName]	Date:	[Date]	
Version	1.0	Notes	Initial Issue	

The documents provided by [CompanyName] disclose proprietary company information that is copyright registered. Please hold these quality documents in confidence and do not share them with other organizations, even if you do not charge a fee.

# **QUALITY SYSTEM TABLE OF CONTENTS**

Project-specific Quality Assurance/Quality Control Plan

Section 1

[CompanyName] Quality Manual

Section 2

# SIGNATURE SHEET

# **Plan Preparer**

This [CompanyName] Project Quality Assurance/Quality Control Plan was prepared in accordance with the contract specifications and requirements of the [CompanyName] quality system and approved by:

# [QualityManagerName] / [Date]

[QualityManagerName], Quality Manager /Date

# **Approval by Company Officer**

This [CompanyName] Project Quality Assurance/Quality Control Plan is approved by:

# [VicePresidentName] / [Date]

[VicePresidentName] President /Date

# **Plan Concurrence**

[CompanyName] Project Quality Assurance/Quality Control Plan concurrence by:

# [ProjectManagerName] / [Date]

[ProjectManagerName], Project Manager /Date

# [SuperintendentName] / [Date]

[SuperintendentName], Superintendent /Date

# PROJECT-SPECIFIC QUALITY PLAN

# **TABLE OF CONTENTS**

Background Information	6
Project Name	6
Project Number	6
Project Location	6
Project Description	6
Project Scope	
A. Project Quality Coordination and Communication	7
B. QC Organization	
C. Names and Qualifications	
D. Duties, Responsibilities, and Authority of QC Personnel	14
Quality Responsibilities	
E. Appointment Letters	
F. Outside Organizations	
Qualification of Subcontractors and Suppliers	21
Purchase Order Approval	
G. Testing Laboratory Information	
Qualification of Testing Laboratories	
H. Submittals Procedures	25
Submittals	25
Submittal Schedule and Log	
Submittal Review and Approval	
Submission to Customer	
Customer Approved Submittals	
Contract Submittal Schedule	
I. Material Inspection Traceability and Quality Controls	29
Identification of Lot Controlled Materials	29
Material Receiving and Inspection	29
J. Quality Testing Plan and Log	33
Preparation of Inspection and Test Plan	33
K. Calibration of Inspection, Measuring, and Test Equipment	35
L. Procedures Completion of Rework Items	
·	
Nonconformance Controls	
Nonconformance Corrective Actions	
Nonconformance Preventive Actions	39
M. Documentation Procedures	/11

N. Procedures for Performing the Three Phases of Control	45
Phase 1: Preparatory Phase	45
Phase 2: Initial Phase	46
Phase 3: Follow-up Phase	47
O. Procedures for Completion Inspection	56
Punch-Out QC Inspection	56
Pre-Final Customer Inspection	56
Final Acceptance Customer Inspection	56
P. Training Procedures and Training Log	60
Project Quality Training	60
Q. Design Control	63
R. Quality Assurance Surveillance	64
Project Quality Performance Surveillance	
Project Quality Audits	
Project Audit PlanProject Audit Requirements	65
	65
S. Additional Quality Control Paguiraments	67

# H. SUBMITTALS PROCEDURES

# **SUBMITTALS**

Lists of documents and records that will be submitted to the customer appear on the Submittal Schedule and Log form. The Submittal Schedule and Log Form exhibit is included in this subsection.

# SUBMITTAL SCHEDULE AND LOG

The Project Manager identifies submittals that apply to a specific contract and when they should be submitted, including:

- Contract requirement reference (if applicable)
- Submittal type: Shop drawing, product data, quality inspection and test plan, request for information, or allowances and unit prices
- Description
- Due date for submission to customer by [CompanyName]
- Due date for approval by the customer. Due dates may be several days after a project plan milestone.
- Approval date

# SUBMITTAL REVIEW AND APPROVAL

The Quality Manager prepares submittals that provide additional details of how [CompanyName] plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the [CompanyName] Quality System. The Quality Manager must sign approval of each contract submittal.

[CompanyName] extends compliance to contract specifications to all customer approved submittals. All [CompanyName] activities comply with customer approved submittals.

# **SUBMISSION TO CUSTOMER**

See Submittal Forms exhibits in this subsection for all the forms that will be used to submit submittals on this project.

# **CUSTOMER APPROVED SUBMITTALS**

The Project Manager obtains the signature of an authorized customer representative on the submittal form.

[CompanyName] extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

# **CONTRACT SUBMITTAL SCHEDULE**

The Project Manager identifies submittals that apply to a specific contract and when they should be submitted, including:

- Contract requirement reference (if applicable)
- Submittal type: Shop drawing, product data, quality inspection and test plan, request for information, or allowances and unit prices
- Description
- Due date for submission to customer by [CompanyName]
- Due date for approval by the customer. Due dates may be several days after a project plan milestone.
- Approval date

[CompanyName] Project Submittal Form					
Submittal ID#	Project ID	Project Name	Date		
	[ProjectNumber]	[ProjectName]			
То:		From: [CompanyName] Location:			
Type of Submittal:  Shop drawing  Product data  Request for information  Completed form or quality reconctions	cord	Description of submittal:			
Other: List of attachments:	180°18	Remarks:			
Submittal Prepared by: [CompanyName]  Name:  Title:  Signature / Date:	58	Submittal Approved by [Companyl Name: Title: Signature / Date:	Name] Quality Manager:		
Customer Disposition:  Approved Conditionally approved, result comments)  Disapproved, resubmission re		Customer Representative:  Name:  Title:  Signature / Date:			
Comments:					

[CompanyName] Project Submittals Schedule and Log						
Contract ID	Contract ID Contract Name Preparer Date Notes					
[ProjectNumber]	[ProjectName]	[ProjectManagerName]				

Contract Section Activity ID	Technical Specification Reference / Version Date	Type/Description of Submittal	Version /Date	Required Submittal Date	Date Submitted to Customer	Required Customer Approval Date	Customer Approval Date

# J. QUALITY TESTING PLAN AND LOG

The Quality Test Plan and Log lists the tests that will be performed on this project. The Quality Test Plan exhibit is included in this subsection.

# PREPARATION OF INSPECTION AND TEST PLAN

The Quality Manager prepares quality inspection and test plans for a project that identifies:

- Each required quality inspection and/or test including special inspections if applicable
- Inspection and test specifications for each required quality inspection or test
- Hold points for customer quality inspection
- Specification requirements for each quality inspection and test

# **INDEPENDENT MEASUREMENT AND TESTS**

The Quality Manager ensures that quality tests that apply to a specific project are clearly identified. Tests for a project include:

- Customer required quality tests as specified by the contract, contract technical specifications, contract drawings, and approved submittals.
- Additional quality tests necessary to assure quality results.

# [CompanyName] Inspection and Test Plan and Log Project Number | Project Name [ProjectNumber] | [ProjectName]

Item	Spec Section Number	Spec Section Title	Applicable Standard	Inspections & Tests Description	# Of Tests /Inspections Reqd.	Time Schedule/ Frequency	Inspection/Test By (All tests verified by Superintendent and/or Quality Manager)	Sample Reqd. Yes/No	Unique characteristics of QC Service
1.									
2.									
3.									
4.					9				
5.									
6.									
7.									
8.									
9.				XO					
10.									
11.			. 0						
12.									
13.									
14.									
15.									
16.									

# N. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL

Three phases of control and a definable feature of work task completion inspection will be performed for each defined feature of work.

The controls and the forms that will be used to record control activities are included on table N-1.

Table N-1

Control	Form	
Phase 1: Preparatory Phase	Preparatory Phase Checklist	
Phase 2: Initial Phase	Initial Phase Checklist	
Phase 3: Follow-up Phase	Contractor Quality Control Report	
Definable Feature Completion Inspection	Definable Feature Inspection Form	

Three Phases of Control and FOW Completion Inspection forms exhibits are included as an exhibit in this subsection.

# **PHASE 1: PREPARATORY PHASE**

Phase 1 is the Preparatory Phase that plans quality for an upcoming definable feature of work task. It includes a requirements review, site inspection, and a preparatory meeting. Records of the preparatory phase of control are recorded on the Preparatory Phase Checklist included as exhibits in this subsection.

Procedures that will be used on this project to conduct the Phase I preparatory phase of control are as follows.

# PREPARATORY DEFINABLE FEATURE OF WORK TASK QUALITY CONTROL PLANNING

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

- Objectives and acceptance criteria of the definable feature of work task
- Quality standards that apply to the definable feature of work task
- Work instructions, process steps, and product installation instructions that apply to the definable feature of 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

### **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 definable feature of work task to begin
- Identifies potential problems

# DEFINABLE FEATURE OF WORK TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a definable feature of 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 definable feature of work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a definable feature of 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 definable feature of 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
- Definable Feature of Work Tasks quality inspection form

# PHASE 2: INITIAL PHASE

Phase 2 is the Initial Phase occurs when crews are ready to start work to ensure work begins only when it does not adversely impact quality results. Inspections are performed before work starts and after work starts.

Records of the initial phase inspection is maintained using the Initial Phase Checklist form appearing as an exhibit in this subsection.

Procedures that will be used on this project to conduct the Phase 2 initial phase of control are as follows.

### **JOB-READY INSPECTION BEFORE WORK BEGINS**

For each definable feature of work task, the Superintendent or a qualified inspector performs job-ready quality inspections to ensure that work activities begin only when they should begin. Job-ready quality inspections verify that conditions conform to the project quality requirements.

### **INITIAL WORK INSPECTION**

For each definable feature of work task, the Superintendent or a qualified inspector performs an initial work in process inspection when the first representative portion of a work activity is completed.

# PHASE 3: FOLLOW-UP PHASE

Phase 3 is the follow-up phase that occurs while work is in process to assure that work conforms to quality project requirements and continues only when it does not adversely impact quality results.

Records of the follow-up phase inspection is maintained using the Initial Contractor Quality Control form appearing as an exhibit in this subsection. Records of the definable feature of work task completion inspections is maintained using the Definable Feature of Work Task Completion Inspection form appearing as an exhibit in this subsection.

Procedures that will be used on this project to conduct the Phase 3 Follow-up phase of control are as follows.

# **WORK IN PROCESS FOLLOW-UP**

The Superintendent or a qualified inspector performs ongoing work in process quality inspections to ensure that work activities continue to conform to project quality requirements.

# **INSPECTION OF SPECIAL PROCESSES**

The Quality Manager identifies special processes where the results cannot be verified by subsequent inspection or testing and determines if continuous work in process inspections are required. For these special processes, a qualified inspector continuously inspects the work process.

### **PUNCH ITEM CORRECTIONS**

If the Superintendent or inspector observes an item for correction prior to a definable feature of work task completion inspection, the item is identified for correction. During the definable feature of work task completion inspection each punch item correction is verified.

Any outstanding punch items remaining after the definable feature of work task completion inspection is deemed a nonconformance.

### **DEFINABLE FEATURE OF WORK TASK COMPLETION INSPECTION**

For each definable feature of work task, the Quality Manager or a qualified inspector inspects the completion of each definable feature of work task to verify that work conforms to project quality requirements.

Completion quality inspections are performed for each definable feature of work task. Completion quality inspections are conducted before starting other work activities that may interfere with an inspection.

Any outstanding punch items remaining after the definable feature of work task completion inspection is deemed a nonconformance.

# [CompanyName]

# **Quality Manual**

# Operating Policies of the [CompanyName] Quality System

Management acceptance

This Quality Manual has been reviewed and accepted

Endorsed By: (Name / Title)	[PresidentName], President		
Signature:	[PresidentName]	Date:	[Date]
Version	1.0	Notes	Initial Issue

# **QUALITY MANUAL**

# **TABLE OF CONTENTS**

1. Quality System Management and Responsibilities	2
1.1. Overview	2
1.2. [CompanyName] Quality Policy	2
1.3. Quality Duties, Responsibilities, and Authority	2
1.4. Quality System Performance Measures	5
1.5. Customer Satisfaction Performance Measures	5
1.6. Exceptions	
2. Project Quality Assurance/Quality Control Plan	6
2.1. Overview	6
2.2. [CompanyName] Project License and Qualification Requirements	
2.3. Project Personnel and Qualifications	
2.4. Project Quality Assurance/Quality Control Plan	
2.5. Identification of Quality Controlled Work Tasks	
2.6. Project Quality Inspection and Test Plan	
2.7. Project Quality Communications Plan	
2.8. Project Quality Training Plan	
2.9. Customer Training On Operation and Maintenance	
2.10. Project Records and Documentation Plan	
2.11. Project Audit Plan	9
3. Contract Specifications	10
3.1. Overview	10
3.2. Contract Technical Specifications	10
3.3. Contract Drawings	10
3.4. Contract Submittals	10
3.5. Customer Submittal Approval	12
3.6. Contract Warranty	12
3.7. Contract Review and Approval	13
4. Design Review and Control	14
4.1. Overview	14
4.2. Design Input Review	14
4.3. Project Design Quality Assurance/Quality Control Plan	14
4.4. Design Progress Reviews	15
4.5. Design Output Verification and Approval	15
5. Project-Specific Quality Standards	16
5.1. Overview	16
5.2. Regulatory Codes	16
5.3. Industry Quality Standards	16
5.4 Material and Equipment Specifications	16

	5.5. Work Process Specifications	17
	5.6. Controlled Material Identification and Traceability	17
	5.7. Measuring Device Control and Calibration	17
	5.8. [CompanyName] Quality Standards	18
	5.9. Application of Multiple Sources of Specifications	18
6	. Project Purchasing	19
	6.1. Overview	19
	6.2. Qualification of Outside Organizations and Company Departments	19
	6.3. Quality Responsibilities of Key Subcontractor and Supplier Personnel	
	6.4. Requirements for Subcontractor QC Plan	
	6.5. Subcontractor and Supplier Quality Policy	21
	6.6. Project Subcontractor and Supplier List	22
	6.7. Purchase Order Requirements	
	6.8. Project Purchase Order Approvals	22
7	. Process Controls	23
	7.1. Overview	23
	7.2. Project Startup and Quality Control Coordination Meeting	
	7.3. Preparatory Project Quality Assurance/Quality Control Plan Planning	
	7.4. Weekly Quality Planning and Coordination Meetings	
	7.5. Process Control Standards	
	7.6. Daily Quality Control Report	
	7.7. Monthly Quality Control Report	
8	. Inspections and Tests	
	8.1. Overview	
	8.2. Required Work Task Quality Inspections and Tests	
	8.3. Material Inspections and Tests	
	8.4. Work in Process Inspections	
	8.5. Work Task Completion Inspections	
	8.6. Inspection of Special Processes	
	8.7. Independent Measurement and Tests	
	8.8. Commissioning Functional Acceptance Tests	
	8.9. Hold Points for Customer Inspection	
	8.10. Quality Inspection and Test Specifications	
	8.11. Inspection and Test Acceptance Criteria	
	8.12. Inspection and Test Status.	
	8.13. Independent Quality Assurance Inspections	
	8.14. Inspection and Test Records	
	8.15. Project Completion and Closeout Inspection	
9	. Nonconformances and Corrective Actions	
	9.1. Overview	
	9.2. Nonconformances	
	9.3. Corrective Actions	
	J.J. Com Court / Michael J. Micha	

10. Preventive Actions	35
10.1. Overview	35
10.2. Identify Preventive Actions for Improvement	35
10.3. Train Preventive Actions for Improvement	
11. Quality System Audits	37
11.1. Overview	37
11.2. Project Quality System Audit	37
11.3. Company-wide Quality System Audit	37
12. Record and Document Controls	38
12.1. Overview	38
12.2. Quality System Documents	38
12.3. Document Controls	38
12.4. Record Controls	
13. Appendix	
13.1 Definitions of Terms	40

28/69/60

# 3. CONTRACT SPECIFICATIONS

# **DEFINE CUSTOMER QUALITY EXPECTATIONS**

### 3.1. OVERVIEW

Fulfilling customer contract expectations is a primary objective of the [CompanyName] Quality System. To ensure that customer expectations will be fulfilled, [CompanyName] clearly defines the requirements for each contract before it is approved.

The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction.

# 3.2. CONTRACT TECHNICAL SPECIFICATIONS

The Project Manager obtains contract technical specifications from the customer.

For each specific contract, The Vice President identifies supplemental technical specifications on the Project Quality Assurance/Quality Control Plan when they are not otherwise specified by the contract or the approved drawings. Superintendents have jobsite access to contract technical specifications for the construction activities they supervise.

All [CompanyName] activities comply with the contract technical specifications.

### 3.3. CONTRACT DRAWINGS

The Project Manager obtains customer supplied drawings that have been approved by local government regulators. Superintendents have jobsite access to approved architectural drawings for the construction they supervise.

All [CompanyName] activities comply with the drawing details and specifications cited in the drawings.

# 3.3.1.1. As-BUILT RED-LINE DRAWINGS

As the project progresses, the Superintendent will mark the original design drawings to indicate as-built conditions including changes to specified materials, dimensions, locations, or other features.

# 3.4. CONTRACT SUBMITTALS

The Quality Manager prepares submittals that provide additional details of how [CompanyName] plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the [CompanyName] Quality System. The Quality Manager must sign approval of each contract submittal.

[CompanyName] extends compliance to contract specifications to all customer approved submittals. All [CompanyName] activities comply with customer approved submittals.

### 3.4.1. CONTRACT SUBMITTAL SCHEDULE

The Project Manager identifies submittals that apply to a specific contract and when they should be submitted, including:

- Contract requirement reference (if applicable)
- Submittal type: Shop drawing, product data, quality inspection and test plan, request for information, or allowances and unit prices
- Description
- Due date for submission to customer by [CompanyName]
- Due date for approval by the customer. Due dates may be a number of days after a project plan milestone.
- Approval date

### 3.4.2. SHOP DRAWING SUBMITTALS

The Project Manager or Purchasing and Estimating Manager prepare shop drawing submittals that supplement contract drawings. Shop drawings are required when additional details are necessary for fabrication or installation. The following information is included, as applicable:

- Dimensions established by field measurement
- Relationships to adjoining construction
- Identification of products and materials
- Fabrication and installation drawings
- Diagrams showing locations of field-installations
- Shop fabricated manufacturing instructions
- Templates and patterns
- Design calculations
- · Compliance with specified standards
- Seal and signature of professional engineer if required
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

[CompanyName] extends contract specifications to include customer approved shop drawings.

# **3.4.3. PRODUCT DATA SUBMITTALS**

The Project Manager prepares product data submittals that consist of the manufacturer's product information. The information included in this submittal is:

- Manufacturer, trade name, model or type number
- Description
- Intended use
- Size and physical characteristics including drawings when applicable
- Finish and color characteristics
- Product manufacturer's installation instructions, when applicable
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

### 3.4.4. ALLOWANCES AND UNIT PRICES SUBMITTALS

When customer contracts specify allowances and unit prices that the customer will select after the contract is awarded, the Project Manager prepares an allowance and unit price submittal for customer approval.

When a customer selects or approves an allowances and unit prices, the customer indicates the allowance and unit price selection on the signed submission return.

[CompanyName] extends compliance to contract specifications to customer approved allowances and unit prices.

### 3.4.5. REQUEST FOR INFORMATION (RFI) SUBMITTALS

The Project Manager submits a request for additional information to the customer when errors are found or when required information is not contained in the contract, contract technical specifications, or contract drawings.

Should any number of contract technical specifications or contract drawings result in conflicting requirements, the Quality Manager submits a request for information to the customer to select the standard that applies.

[CompanyName] extends compliance to contract specifications to customer requests for information.

### 3.4.6. CHANGE ORDER SUBMITTALS

Contract requirements or contract technical specifications may require a change after the contract is awarded. The Project Manager submits the change order to the customer for approval, including any contract price adjustments.

When a customer approves a change order, the customer signs the submission return.

[CompanyName] extends contract specifications to include customer approved change orders.

### 3.4.7. MOCK-UP SUBMITTALS

The Superintendent prepares mock-up submittals as required by contract. Additionally, the Quality Manager specifies mock-up requirements when they are necessary to ensures customer expectations are clearly identified.

The Quality Manager ensures that each mock-up demonstrates specific elements of form and/or function, and that they are specified in the submittal documents.

[CompanyName] extends contract specifications to include customer approved mock-up submittals.

### 3.5. CUSTOMER SUBMITTAL APPROVAL

The Project Manager obtains the signature of an authorized customer representative on the submittal form.

[CompanyName] extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

# 3.6. CONTRACT WARRANTY

The Project Manager ensures that customer contracts clearly specify warranty coverage including:

- Scope
- Starting date
- Duration

The Project Manager ensures that customer contracts also clearly specify owner responsibility for:

- Restrictions of use
- Maintenance requirements
- Exclusions for customer supplied materials or equipment
- Timely notification of problems

# 3.7. CONTRACT REVIEW AND APPROVAL

The Vice President conducts customer contract reviews to ensure that:

- Customer requirements and specifications are complete
- Customer requirements and specifications are compatible with the relevant regulations,
   [CompanyName] quality standards, and Quality System requirements
- [CompanyName] has the capability to deliver the completed project in the time allotted

Before construction begins, the Vice President makes sure that all contract requirements are clearly understood, all discrepancies are resolved, and all requirements are agreed upon. Once these requirements are met, the Vice President signs the contract.

# 9. Nonconformances and Corrective Actions

### 9.1. OVERVIEW

Should a nonconformance be identified by an inspection there is a systematic method to control the item, correct it, and ensure that project quality is not adversely impacted by the event.

A nonconformance is any item that does not meet project specifications or [CompanyName] Quality System requirements.

### 9.2. Nonconformances

### 9.2.1. MARKING OF NONCONFORMANCES AND OBSERVATIONS

When the Quality Manager, Superintendent, inspector, or customer identifies a nonconformance or an observation, the item is quickly and clearly marked by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

### 9.2.2. CONTROL THE CONTINUATION OF WORK

After the item is marked, the Superintendent determines if work can continue in the affected area:

CONTINUE WORK: When continuing work does not adversely affect quality or hide the defect, work may continue in the affected area while the disposition of the item is resolved. The Superintendent may place limitations on the continuation of work.

STOP WORK ORDER: When continuing work can adversely affect quality or hide the defect, work must stop in the affected area until the disposition of the item resolved. The Superintendent identifies the limits of the affected area. The Superintendent quickly and clearly identifies the boundaries of the stop work area.

### 9.2.3. NONCONFORMANCE REPORT

### 9.2.3.1. RECORDING OF NONCONFORMANCES

If nonconformances or observed items exist by the work task completion inspection, the Superintendent or inspector records the nonconformances on a nonconformance report.

The Superintendent sends the nonconformance report to the Quality Manager.

# 9.2.3.2. QUALITY MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

When the Quality Manager receives a Nonconformance Report, he or she assesses the affect the reported nonconformance has on form, fit, and function. The Quality Manager may assign a disposition of either:

REPLACE: The nonconformance can be brought into conformance with the original specification requirements by replacing the nonconforming item with a conforming item.

REPAIR: The nonconformance can be brought into conformance with the original requirements through completion of required repair operations.

REWORK: The nonconformance can be made acceptable for its intended use, even though it is not restored to a condition that meets all specification requirements. The Quality Manager may specify

standards that apply to the completion of rework. Rework nonconformances must be approved by the customer.

USE AS-IS: When the nonconforming item is satisfactory for its intended use. Any use as-is items that do not meet all specification requirements must be approved by the customer.

### 9.2.4. CORRECTION OF NONCONFORMANCES

The Superintendent verifies that corrective actions eliminate the nonconformance to the requirements of the original specifications or as instructed by the disposition of the nonconformance report, and then removes, obliterates, or covers the nonconformance marker.

Furthermore, the Superintendent ensures that previously completed work is reinspected for similar nonconformances and corrective actions are taken to avert future occurrences (see section 9.3 Corrective Actions).

### 9.3. CORRECTIVE ACTIONS

### 9.3.1. CONTROL OF CORRECTIVE ACTIONS

When a nonconformance is found, the Superintendent ensures that:

- Previously completed work is reinspected for similar nonconformances
- Corrective actions are taken to avert future occurrences

The Quality Manager identifies requirements for corrective actions with respect to frequency, severity, and detectability of quality nonconformances items found during and after completion of work activities.

When a solution requires changes to [CompanyName] quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

# 9.3.2. CORRECTIVE ACTION TRAINING

The Superintendent initiates corrective action training to address quality nonconformances. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the corrective action improvement items. A qualified Superintendent inspects corrective actions during regular quality inspections and records observations on the quality inspection form.

The Superintendent notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Superintendent evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.

# **10. Preventive Actions**

# PREVENT NONCONFORMANCES

### 10.1. OVERVIEW

Fixing problems found during quality inspections is not sufficient. Systematic prevention of recurrences is essential for improving quality.

[CompanyName] makes changes to solve the problem. Solutions may involve a combination of enhanced process controls, training, upgrade personnel qualifications, improved processes, or use of higher-grade materials.

Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

# 10.2. IDENTIFY PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager identifies preventive action improvement priorities with respect to frequency, severity, and detectability of quality correction items found during and after completion of work activities. The Quality Manager also reviews company quality performance and customer feedback.

More specifically, the Quality Manager assesses:

- Customer corrective items
- Superintendent quality inspection results
- Code official inspection results
- Post-construction service
- Management field reviews
- Annual system review
- Customer satisfaction surveys

The Quality Manager documents quality items requiring preventive action improvement.

The Quality Manager leads the company in finding solutions to address the causes of problems.

When a solution requires changes to [CompanyName] quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

### 10.3. TRAIN PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager initiates preventive action training to address quality improvement items. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the preventive action improvement items. A qualified Superintendent inspects hotspots during regular quality inspections and records observations on the quality inspection form.

The Quality Manager notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Quality Manager evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.



# For More Information:

**Contact: First Time Quality** 

410-451-8006

edc@firsttimequality.com