

# QUALITY CONTROL PROGRAM

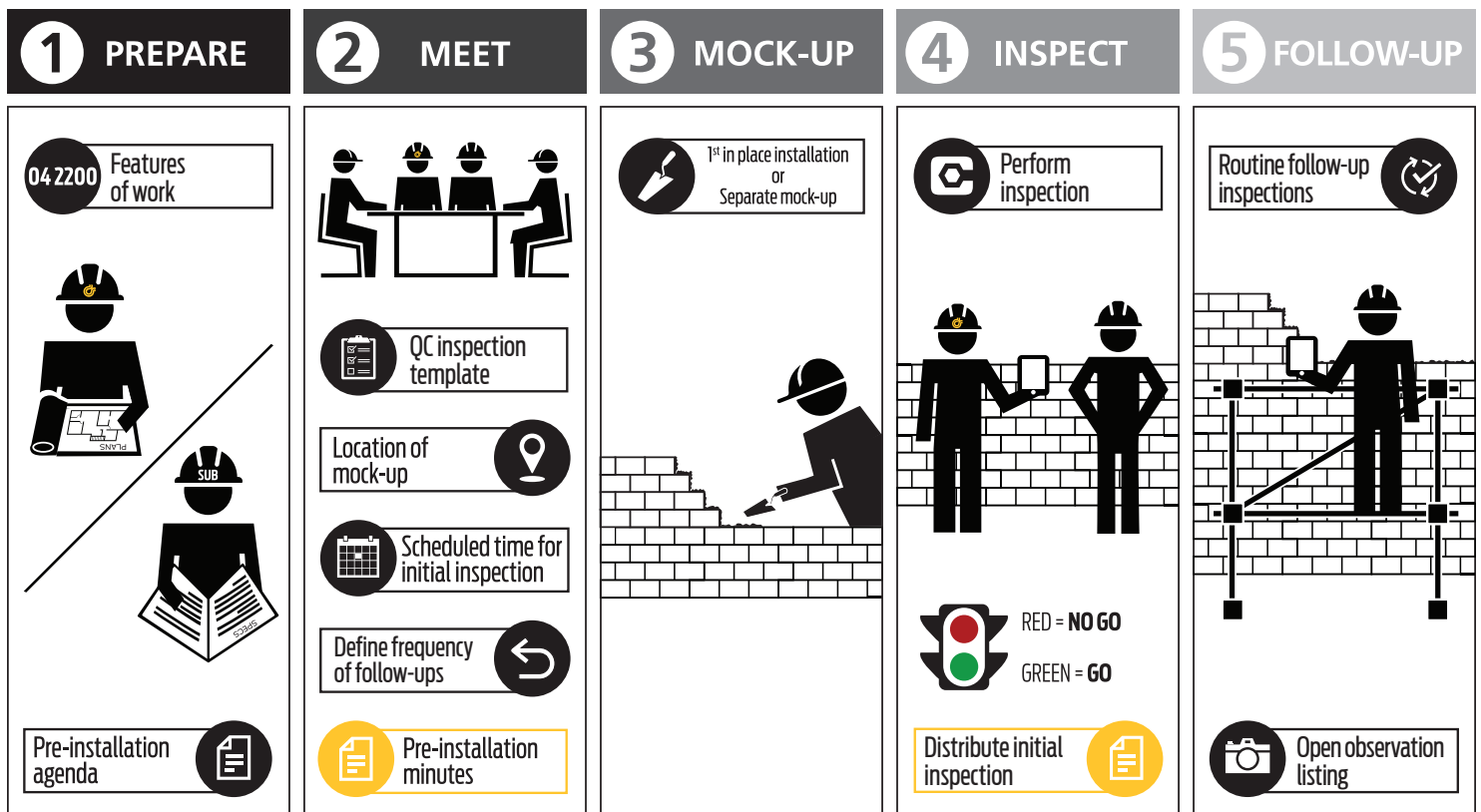


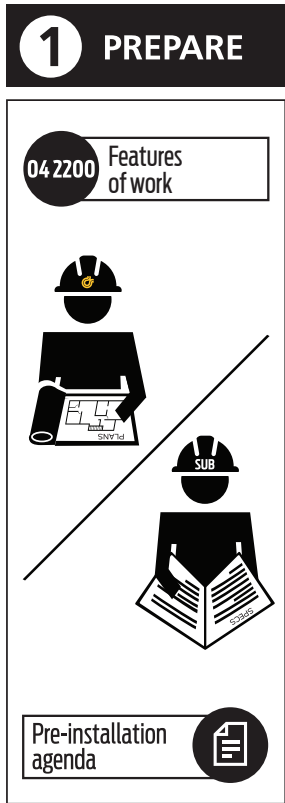
Okland's Quality Control Program is designed to deliver consistent, best-in-class, repeatable results across all projects. The objective is to eliminate rework through positive communication and proactive measures. The pre-installation meeting and initial inspection are the two key components of this plan.

## PLAN SUMMARY:

- Clearly define responsible individual(s) to implement quality control plans.
- Initiate QC process early during the design phase.
- Conform to all contractual requirements, specifications, and applicable standards.
- Eliminate rework: define initial installation location and inspect with all involved parties prior to subcontractor proceeding with scope of work.
- Compile accurate records of test certifications and other required documentation.
- Track and document quality discrepancies and measures required for immediate corrective action.
- Document the occurrence and correction of quality issues.

# QUALITY CONTROL PLAN





During the **Prepare** phase, all parties (internally and externally) should fully understand the contract documents and start preparing for the pre-installation meeting for each feature of work identified on the project. This phase is on-going and should be applied to every subcontractor and scope of work specific to each project. Every project team member is involved during the prepare phase.

## FEATURES OF WORK – PROCUREMENT LOG – SUBMITTAL REGISTER

**Features of Work:** This is the first step when outlining your high risk features of work and the contractors responsible for each. The listing of high risk FOW should be managed by a senior project engineer alongside the superintendent. These are tracked within the Observations tool as action items.

- The planned pre-install date should directly tie to the estimated start date of subcontractor and the completion of required submittals.
- The planned pre-install date should be used as the due date of the observation.

**Procurement Log:** This log is the next step in prioritizing the project team’s attention in work order execution, submittal review, and scheduled start dates. The procurement of material is the leading cause of success or failure on a project and a strong procurement log will set clear expectations throughout the course of the project.

- This is a list of assets or material items, not submittal documents.
- This is built by a Senior Project Engineer (or above) and updated alongside the superintendent.

**Submittal Register:** This register outlines all required submittals from every subcontractor that need to be approved before a pre-install meeting can take place. It lists all specifications and required materials necessary to create an accurate procurement log and catalogs all contractual install requirements for every product to be used on the project.

## PROJECT TEAM COMMUNICATION

Communication is imperative during the prepare phase as it helps both the administrative and field managers align all priorities established from the procurement log and FOW listing.

**Weekly Staff Meetings:** This is a requirement for every project and should include all project team members on site.

## PRE-INSTALLATION MEETING PREPARATION

Create a new pre-install meeting agenda: Use the Okland company template and expand on the details listed below.

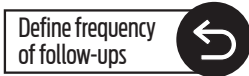
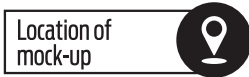
Identify all necessary attendees: Okland personnel, subcontractor project manager, foreman/superintendent, safety manager, manufacturer rep, design team member, etc.

Identify all outstanding submittal questions or mark-ups from the design team that need to be addressed. All submittals need to be approved and finalized prior to this meeting.

Create an inspection template from Okland’s company library and modify to be project specific. Bring this template to the meeting to review and receive buy-in from relevant subcontractor(s).

List of all procurement items with estimated lead times.

## 2 MEET



The **Pre-Installation Meeting** allows all involved parties to discuss quality requirements, details, materials, schedule, etc. related to a specific feature of work. Outputs from the pre-installation meeting include a finalized checklist and an established time for the initial inspection. A specific location should also be designated for the first-in-place installation, or mock-up. All field crews involved in the installation should be in attendance.

### MEETING REQUIREMENTS

Ensure proper attendance from Okland personnel, subcontractor, and third-party come prepared and actively participate.

Okland's company level pre-installation meeting agenda has been customized according to feature of work, reviewed by project manager, and distributed prior to meeting date.

### MEETING DISCUSSIONS

Review each applicable specification, reference codes, and standards outlined in the contract documents.

All ASTM and code requirements are addressed in Part 2 - Products and all installation practices and requirements specified in Part 3 - Execution of the specification manual are reviewed and confirmed.

Review all required testing and inspection requirements.

Review all submittal product data and shop drawings. Confirm unique details and product compatibility with adjacent material.

Review product manufacturer's written instructions.

Physical examination of the work area is reviewed. All required preliminary work has been completed and is in compliance with the substrate standards of this feature of work.

Review all necessary temporary facilities and controls, space and access limitations, time schedule and work hours, and weather limitations.

Review installation and performance requirements, including procedures for controlling the quality of work, such as repetitive deficiencies. Document construction tolerances and workmanship standards for the scope of work.

All quality control inspections are reviewed applicable to the feature of work and project constraints.

### MEETING OUTCOMES

Inspection template has been finalized and simplified to project-specific standards. All attendees are in agreement with the quality questions asked during the inspection.

Date and location of first-in-place mock-up has been established for the initial inspection.

Designated Okland inspector has been assigned for each initial inspection.

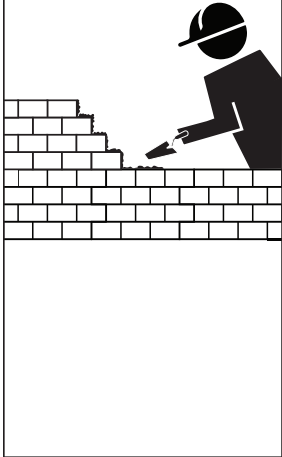
Agree and define frequency of follow-up inspections. At a minimum, the second follow-up should be scheduled in addition to the initial.

Meeting minutes are distributed and added as a related item to the initial inspection in Procore.

## 3 MOCK-UP



1<sup>st</sup> in place installation  
or  
Separate mock-up



The **Mock-Up** or first-in-place installation phase allows the subcontractor to install a limited area of the specific feature of work. This can be completed as a first-in-place installation or as a separate mock-up. Specified materials and methods are to be used during these installations. The completed mock-up is to be prepared for the initial inspection that was scheduled during the pre-installation meeting.

### INSTALLATION REQUIREMENTS

Ensure proper storage of all materials and equipment per specifications and manufacturers' recommendations.


Ensure only specified and approved materials are delivered and used.

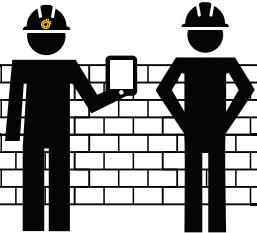
All material deliveries are coordinated with Okland's superintendent for receipt inspection and proper storage.


Subcontractor is to only use qualified and trained craft workers familiar with the project requirements and inspections outlined during the Meet phase. The foreman/superintendent in charge was in attendance at the pre-install meeting.


Subcontractor has run their own quality checks and inspections on the work to ensure conformance with the contract documents, inspection requirements, and workmanship standards.

**4 INSPECT**

 Perform inspection



 RED = **NO GO**  
GREEN = **GO**

Distribute initial inspection 

The **Inspection** phase refers to a one-time inspection of the mock-up or first-in-place installation. This step allows all parties to inspect the work using the checklist that was finalized during the pre-installation meeting. Okland will issue either a 'Go' or 'No Go' status in the initial inspection report. A 'Go' status allows the subcontract to proceed with the full installation of the specific feature of work. Any notes or comments made during the inspection will be recorded in the initial inspection report.

## INITIAL INSPECTION REQUIREMENTS

Use the finalized checklist created during the pre-install meeting to perform the initial inspection. Reference pre-installation minutes during the inspection.

The initial phase should be repeated for each new crew who works on site, or any time acceptable specified quality standards are not being met.

Ensure work is in full compliance with contract documents.

Verify required control inspection and testing.

Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.

Check for omissions and resolve any differences of interpretation with the owner representative and/or design team.

General check of dimensional requirements.

## INSPECTION OUTCOMES

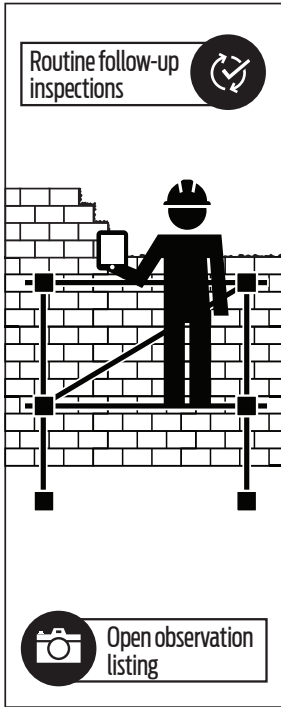
The initial inspection must result in either a **Go** (Pass) or **No Go** (Fail) status.

**GO** - The work is in compliance, subcontractor is released to continue with installation.

**GO** - Acceptable pending refinements - Subcontractor is allowed to continue work on a defined location for verification of required refinements. A follow-up inspection will be held for agreed defined location.

**NO GO** - Rejected - Initial installation will be reworked for another initial inspection. No more work will be performed until initial area has been re-inspected.

## 5 FOLLOW-UP



Once the initial inspection has been completed and a 'Go' status has been issued, the subcontractor will continually inspect their work for conformance to the specified requirements. The Follow-Up phase allows Okland to perform frequent checks to assure continued compliance, control testing, and control activities per contract requirements until completion of the feature of work. This can be completed by running multiple instances of the initial inspection or document continued progress through observations.

### FOLLOW-UP REQUIREMENTS

Assurance of continuous compliance with contract drawings and specifications.

Daily control testing as required.

All deficiencies will be corrected prior to the start of additional features of work.

Document QC efforts and installation conformance.

Regularly train new craft on pre-established quality control requirements for their specific feature of work.