Arizona Department of Transportation

INTERMODAL TRANSPORTATION DIVISION
Construction Group

CONSTRUCTION BULLETIN 06-01

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Date: August 1, 2006

From: Julio Alvarado, Assistant State Engineer, Construction

Subject: Documentation Using Quantlists

Construction Inspection Checklists (Quantlists)*

Purpose

To update previously issued Construction Bulletin 02-04, issued November 27, 2002, on the subject *Documentation Using Checklists*. This bulletin emphasizes the requirement to document electronically the mandatory checklists, in order to attain consistency in evaluating Contractor's processes and products.

Background

Construction Inspection Checklists (Quantlists)* have been developed and are available to assist the Inspector to perform inspections on most items involved in highway construction. The intent of the quantlist is to affirm quality requirements at the beginning of a project, assure construction processes are in control and stabilized and that the product meets quality goals. The requirements compliment the ADOT Construction Manual and Standard Specifications, Subsection 105.11, Authority and Responsibility of Project Supervisor and Inspectors.

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*Note: The term "quantlists" is a shorter name for the Construction Inspection Checklists; it also distinguishes them from the many other checklists now being used in the Department. A quantlist is a quantitative checklist, which converts attribute information to numbers, and allows for objective evaluation of construction processes. Either Construction Inspection Checklist or Quantlist may be used until the software and training are upgraded.

Instructions

1. Quantlists shall be completed and uploaded to the Construction Operations database web site, in addition to current diary and documentation requirements. For ADOT employees, paper copies of the quantlists are no longer acceptable. (Paper copies of quantlists will also not be acceptable from Consultants once they have been issued an ADOT computer.) Additionally, the Inspector's Daily Diary must identify that a quantlist has been completed and reviewed by the Project Supervisor.

2. Inspectors shall obtain current copies of the quantlists and discuss quality expectations with the Contractor before the beginning of construction of each product covered by the quantlists.

3. Quantlists are available on the "ADOT Checklist Application". The application is available only to users who have had it installed on their computer (access to the ADOTNet is required). Prior to installation, training on the use of quantlists is required. Contact your training coordinator to schedule this class.

4. One quantlist shall be completed after each construction process change until the process is in control and stabilized to the satisfaction of the Engineer. Once the process is in control, the minimum number of quantlists must be completed. The minimum frequency required can be found in the *Current Checklists (Quantlists) Version and Minimum Frequency* chart. (This can be found on the Construction Group web page on the ADOTNet.) This guideline also shows the corresponding Standard Specification Number and most recent version of each quantlist. Internal Audit will verify frequency compliance.

5. Quantlists are constantly being developed and updated as new information becomes available, as the quantlists are improved, or as manufacturers change requirements. When a quantlist is selected, the most current standard version of the quantlist will appear and older versions of the quantlist may also be selected. The version is designated by the date code shown in the upper right corner of the quantlist header.

6. In order to obtain an accurate measurement of the <u>Contractor's</u> workmanship, the quantlist must capture the results of each attribute at the time of inspection. A Rework Quantlist must be completed (at a minimum) for any initial quantlist that was scored 'No' on any attribute(s) weighted 4 or 8. Corrective actions are to be documented in the Inspector's Daily Diary and approved by the Project Supervisor.

7. Below are various statistical reports regarding past performance of completed quantlists. (This can be found on the Construction Group web page on the ADOTNet under *Construction Checklist (Quantlist) Reports)*:

   - **Conformance Report by Product** – average conformance of quantlists statewide or by ORG.
   - **Subcontractors Conformance Report** – statewide average conformance of each Contractor or subcontractor.
   - **Project Conformance Report by Product** – average conformance of quantlists for a specific project.
   - **Inspector Report by Product** – type of quantlist, number completed and conformance for each inspector (per ORG).
   - **Detailed Inspector Report by Product** – lists each quantlist, project number, date of inspection and conformance for each Inspector (per ORG).
   - **Product Attribute Report** – results of each attribute in a quantlist (available statewide or by project).

8. For assistance or suggestions, call Guillermo Silva in Construction Operations at (602) 712-7618.