

---

## Test Procedure for

# PREPARING CONTROL CHARTS FOR BITUMINOUS MIXTURE PAVING PROJECTS



**TxDOT Designation: Tex-233-F**

**Effective Date: October 2016**

---

## 1. SCOPE

- 1.1 Use this method to graphically display and track bituminous mixture test results. In some cases, the charts will predict failure to meet specifications, allowing preventive intervention.
  - 1.2 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.
- 

## 2. PROCEDURE

- 2.1 Open the [Control Chart Excel template](#) (TxCC14.xlsm) to generate and report all results.
  - 2.2 Use the Import button to import results directly from the [QC/QA Excel template](#) into the Control Chart template.  
**Note 1**—The QC/QA data needs to come directly from the Tx2QCQA14.xlsm template.  
**Note 2**—There must be a number in the “LOT NUMBER” field in the General worksheet tab of the 2014 QC/QA template. A dialog box will appear if there is no numerical value in this box or if text is used or included. The Lot Number from the 2014 QC/QA template must match the lot number entered in the Lot Information worksheet. For example, 1, 01, or 001 are acceptable for Lot 1.
  - 2.3 After importing the data, use the Update button to ensure all data has been applied to the chart.
  - 2.4 If an individual lot needs to be deleted from the Control Chart template, select the lot from the drop-down list and click the Delete Lot button. Use the Clear button to erase all data within the Control Chart template.
  - 2.5 Select the item of interest from the “Plot What” drop-down list. All measured values and corresponding limits are plotted end-to-end for the entire length of the project.  
**Note 3**—The Control Chart template can accommodate a maximum of 99 lots.
- 

## 3. TEST RECORD FORMS

- 3.1 Use the [Control Chart Excel template](#) to generate and report all results.
    - 3.1.1 Figure 1 shows an example of a control chart worksheet.
    - 3.1.2 Charts may be attached, end-to-end, to extend the form-length to cover an entire project.
-

- 3.1.3 A separate chart is required for each mixture type and material property.
- 3.1.4 Post control charts on a wall in the plant laboratory where both Contractor and Department personnel can view them.

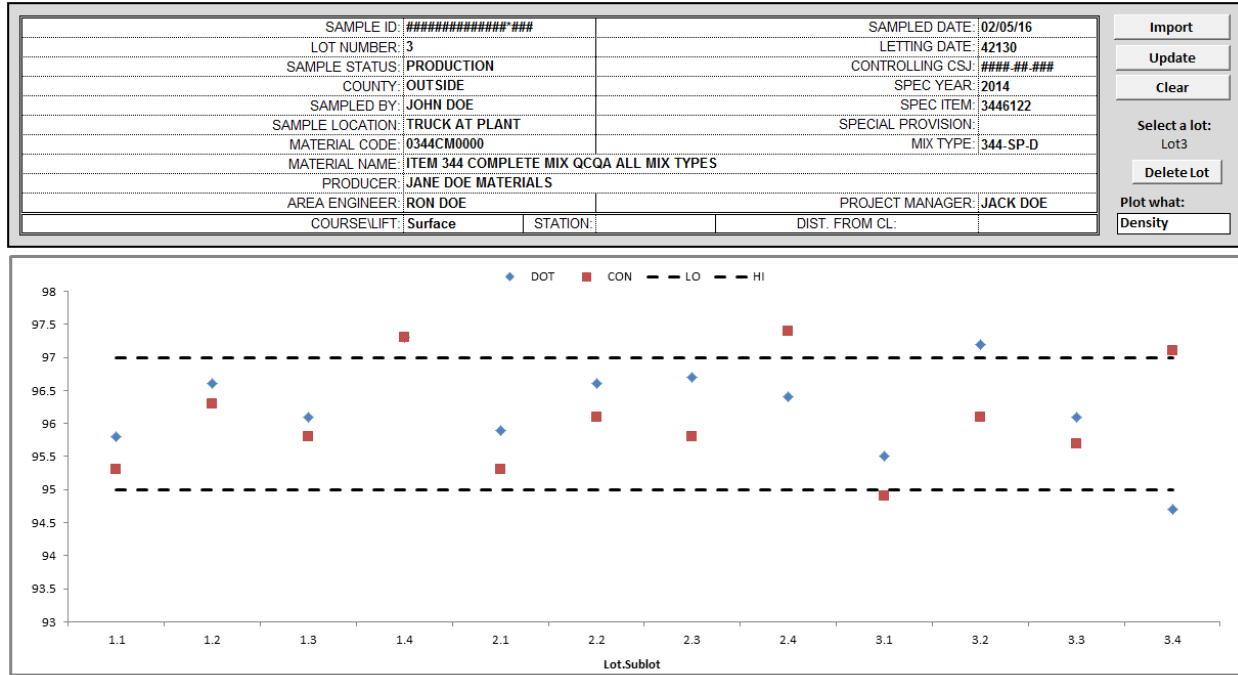


Figure 1—Bituminous Mixture Control Chart Example

#### 4. ARCHIVED VERSIONS

- 4.1 Archived versions are available.