

# KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS\*PORT Information Series

SiteManager Materials Module

## Portland Cement Concrete Mix Design Window

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### General Description

Portland Cement Concrete (PCC) Mix Design window allows for the addition, modification, and approval of Portland Concrete Mix Designs. A PCC Mix Design may not be changed if it is approved. The test results on this window are used by SiteManager for comparison. A PCC Mix Design may also be downloaded for a specific contract.

The PCC Mix Design window has a copy function located under Services on the Description folder tab. The user will be able to open up an existing mix design and copy all the details on the existing PCC Mix design to a new PCC Mix Design and assign a new Mix ID. The copy functionality will copy all the values of the Descriptive tab, Properties tab, Material tab and Gradation tab data. The copy functionality will assign the Effective Date as the current system date on the new mix design. The Termination Date will be blanked out. The Approved Date and Approved By User ID fields will be cleared even if the original mix design had been approved. The user will have to save the data with the new Mix ID to view or change the data of Material tab or Gradation tab.

If the user changes the Material Code on the Description tab and there is Gradation data for that Mix Design ID then a message will be displayed prompting the user that the Gradation data associated to the mix will be deleted and based on users choice the new material code will be accepted and the Gradation data will be deleted.

The search lens on the Materials Tab - Sample ID field will display all the samples if the current user group is the same as assigned to the 'Limited Access Sample Group' or 'Limited Access Standalone Group' System Operational Parameter. The samples locked in "Limited Access" will be excluded from all other user groups.

### Procedure

In KYTC, population of table data related to this window's records shall only be done via the Spreadsheet Applet. All PCC Mix Designs successfully imported via the Applet will be automatically approved. Any changes necessary to the data will need to be done by using the "replacement" function available with the Spreadsheet Applet. Please refer to the following procedures for details on the spreadsheets populating this data:

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- Procedure - PCC Mix Design Hand Out for Applet

## DESCRIPTION FOLDER TAB

### *Description Folder Tab Description*

The primary high-level mix data is entered or updated on this tab.

### *Procedure*

Refer to individual Applet Spreadsheet procedures referenced above.

### *Field Table*

Field Name	Description	KYTC Population Policy & Procedure
Mix ID	The ID for the Portland Cement Concrete mix design.	Refer to individual Applet Spreadsheet procedures referenced above.
Material Code	The transportation agency-defined ID for a material. This is the material code for the Portland Cement Concrete mix.	Refer to individual Applet Spreadsheet procedures referenced above.
Producer Supplier Code	The transportation agency-defined ID for a source/location of the material. Producer/Supplier Code must have an active status on the Producer Supplier table, when entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Designer Name	The name of the designer responsible for the Portland Cement Concrete mix.	Refer to individual Applet Spreadsheet procedures referenced above.
Concrete Class Type	Type of concrete (e.g., Type 1, Type 1A, Type II, etc.).	Refer to individual Applet Spreadsheet procedures referenced above.
Effective Date	Effective date for the Portland Cement Concrete mix. Defaults to current date when a new Portland Cement Concrete mix is entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Termination Date	Date the Portland Cement Concrete mix is no longer available for use. Must be greater than Effective Date.	Refer to individual Applet Spreadsheet procedures referenced above.
Approved Date	A system generated date to identify when the Portland Cement Concrete mix was approved. Defaults to current date when a Portland Cement Concrete mix is approved.	Refer to individual Applet Spreadsheet procedures referenced above.

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Field Name	Description	KYTC Population Policy & Procedure
Approved By User ID	A system generated value containing the user ID of the person approving the Portland Cement Concrete mix.	Refer to individual Applet Spreadsheet procedures referenced above.

## PROPERTIES FOLDER TAB

### *Properties Folder Tab Description*

The detailed mix data is entered or updated on this tab.

### *Procedure*

Refer to individual Applet Spreadsheet procedures referenced above.

### *Field Table*

Field Name	Description	KYTC Population Policy & Procedure
Min Average Strength Required	Minimum strength of concrete required.	Refer to individual Applet Spreadsheet procedures referenced above.
Design Strength Specified	Specified concrete strength.	Refer to individual Applet Spreadsheet procedures referenced above.
Theoretical Unit Wt	Unit weight of mix as calculated from the concrete proportioning.	Refer to individual Applet Spreadsheet procedures referenced above.
Theoretical Unit Wt Unit Type	Unit of measure for theoretical unit weight. Required when Theoretical Unit Wt entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Water Cement Ratio	Ratio of total water content to total cement material per given volume of concrete.	Refer to individual Applet Spreadsheet procedures referenced above.
Unit Weight Measured	Unit weight of mix as calculated from the concrete proportioning.	Refer to individual Applet Spreadsheet procedures referenced above.
Unit Weight Measured Unit Type	Unit of measure for measured unit weight. Required when Unit Weight Measured entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Air Content Measured	Air content of freshly mixed concrete.	Refer to individual Applet Spreadsheet procedures referenced above.
Slump Measured	Slump of concrete after trail batch.	Refer to individual Applet Spreadsheet procedures referenced above.

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Field Name	Description	KYTC Population Policy & Procedure
Slump Measured Unit Type	Unit of measure for measured slump. Required when Slump Measured entered.	Refer to individual Applet Spreadsheet procedures referenced above.

## MATERIALS FOLDER TAB

### *Materials Folder Tab Description*

The constituent material data that make up the mix is entered or updated on this tab.

### *Procedure*

Refer to individual Applet Spreadsheet procedures referenced above.

### *Field Table*

Field Name	Description	KYTC Population Policy & Procedure
Material Code	The transportation agency-defined ID for a material. The Material Code must have an active status on the Material table. The material full description for the highlighted material will display to the right of the material code.	Refer to individual Applet Spreadsheet procedures referenced above.
Brand Name	This is a freeform text field where the brand name of the component material may be entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Producer Supplier Code	The producer/supplier full name for the highlighted producer/supplier will display to the right of the code.	Refer to individual Applet Spreadsheet procedures referenced above.
Sample ID	The ID for a sample. Identifies the sample used to approve the material contained within the Portland Cement Concrete mix design.	Refer to individual Applet Spreadsheet procedures referenced above.
Spcf Gravity	Specific gravity of the material within the Portland Cement Concrete mix design.	Refer to individual Applet Spreadsheet procedures referenced above.
Bulk Spfc Gravity	Bulk specific gravity of the material within the Portland Cement Concrete mix design.	Refer to individual Applet Spreadsheet procedures referenced above.

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Field Name	Description	KYTC Population Policy & Procedure
SSD Weight	Weight of the material within the Portland Cement Concrete mix design needed to make one cubic yard total.	Refer to individual Applet Spreadsheet procedures referenced above.
Absorption Percent	Percent of water the aggregate can absorb.	Refer to individual Applet Spreadsheet procedures referenced above.
Fineness Modulus	Function of the grading of the fine aggregate.	Refer to individual Applet Spreadsheet procedures referenced above.
Mass	The quantity of the material within the Portland Cement Concrete mix design.	Refer to individual Applet Spreadsheet procedures referenced above.
Unit Type	The unit of measure for the quantity of material within the Portland Cement Concrete mix design. Required when Mass entered	Refer to individual Applet Spreadsheet procedures referenced above.

## GRADATIONS FOLDER TAB

### *Gradations Folder Tab Description*

If required, the gradations for the aggregates used in the mix is entered or updated on this tab.

### *Procedure*

Refer to individual Applet Spreadsheet procedures referenced above.

### *Field Table*

Field Name	Description	KYTC Population Policy & Procedure
Effective Date	The date the gradation specification becomes effective. Defaults to current date when a new set of material gradation specifications are created or copied.	Refer to individual Applet Spreadsheet procedures referenced above.
Status	Identifies the current status of this sieve size record (e.g., active or inactive). Status defaults to active.	Refer to individual Applet Spreadsheet procedures referenced above.

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<b>Field Name</b>	<b>Description</b>	<b>KYTC Population Policy &amp; Procedure</b>
Sieve Size	AASHTO and ASTM standard sieve sizes (i.e., 1/2, No. 4, etc.). Sieve size required when Minimum or Maximum entered.	Refer to individual Applet Spreadsheet procedures referenced above.
Sieve Value	The percentage of bituminous mix material passing through the sieve screen.	Refer to individual Applet Spreadsheet procedures referenced above.
Minimum Range	The beginning value for the gradation specification limit.	Refer to individual Applet Spreadsheet procedures referenced above.
Maximum Range	The ending value for the gradation specification limit.	Refer to individual Applet Spreadsheet procedures referenced above.
Min Production Tolerance	The minimum production tolerance value specification. This field is required when the Sieve Value field is populated.	Refer to individual Applet Spreadsheet procedures referenced above.
Max Production Tolerance	The maximum production tolerance value specification. This field is required when the Sieve Value field is populated.	Refer to individual Applet Spreadsheet procedures referenced above.