

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

General Description

This is one of the eight spreadsheet disciplines that KYTC will use for QC/QA program tracking. These spreadsheets allow data to be received by KYTC from Producers/Suppliers outside the department, and automatically loaded (with error checking) into the SiteManager system by the Spreadsheet Applet application developed by KYTC ITI. The eight disciplines include:

<u>Short Name</u>	<u>Description</u>
MIXPACK	Asphalt Mix Design
AMAW	Asphalt Mixtures Acceptance Workbook QC/QA
CONCMIX	Concrete Mix Design
CONCPVMT	Concrete Pavement QC/QA
CONCSTRT	Structural Concrete QC/QA
AGG	Aggregate QC/QA
DENSITY	Moisture-Density QC/QA
STRIPING	Striping QC/QA

The user initiates the Applet and directs the application as to the location of the spreadsheet, and the Applet then attempts to successfully load the spreadsheet. If any errors are encountered, the load is aborted and the specific errors returned to the user. Once successfully loaded into SiteManager, the Applet archives a copy of the spreadsheet for audit trail purposes (as described in **TBD**).

SPECIAL NOTE: The RE's should not procedurally do any loading of CONCMIX spreadsheets; these should actually be done by the DME's or by Central Office personnel.

SPECIAL NOTE: Prior to loading the spreadsheets, the Liquid Admixture constituent Product Names should be validated manually with the SiteManager database (on the Approved Materials window) as the Applet will not be checking this automatically. This was done to help reduce potential typographical errors when entering 40-character Product Names.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Spreadsheet Applet Executable Location

TBD

Spreadsheet Location

TBD

Procedure

The Concrete Mix Design (CONCMIX) Spreadsheet will populate two functional areas of the SiteManager application via the Spreadsheet Applet application:

- The Portland Cement Concrete (PCC) Mix Design window records
- The Sample Information window records.

This document describes the procedures for entering data into the spreadsheet that will be stored into the PCC Mix Design related records in SiteManager. (The Sample Information records loaded by this spreadsheet are described as part of the “PCC (CONCMIX) Sample Information Field Handout for Applet” procedure.) All records loaded by this spreadsheet will be protected (i.e., the Mix Design will be Approved and the Sample will be Authorized).

NOTE: Any changes necessary to the data will need to be done by using the “replacement” function available with the Spreadsheet Applet. Even though this capability exists, this will not be enabled for general use. Only the System Administrator will be able to use this capability for this discipline.

This spreadsheet will only load data associated with the mix designs primary tab’s (i.e., the Description Tab). The remaining SiteManager mix design related records did not match the spreadsheets record content closely enough to make it feasible to load into this area of SiteManager. Therefore, any remaining mix related data will be loaded into the associated Sample’s Test Template record instead.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Please refer to the CONCMIX End-User Procedure for the specific procedures required by the end-user to use this spreadsheet.

The following tables describe the fields loaded on the database, which are visible when viewing on the window, and the source, location, and procedures for each field from the KYTC perspective.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

DESCRIPTION FOLDER TAB (t_pcc)

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Mix ID (mix_id)	<p>The ID for the Portland Cement Concrete mix design established on the Concrete Mix (CONCMIX) Spreadsheet.</p> <p>This field is required and must be unique</p> <p>This field is 15 characters long.</p>	Free-form	Auto-populated by Applet	<p>The District Mix Designs will be the Sample ID number on the Header tab (which is currently limited to 14 characters).</p> <p>KYTC will use DDYYSSSS: DD is the District (Central Office is 00) YY is the Year SSSS is the Mix ID.</p> <p><Header.Mix ID> (same as <Header.Sample ID></p>
Material Code (matl_cd)	<p>The transportation agency-defined ID for the PCC mix that is submitted with the Spreadsheet.</p>	Code Table	End-User (i.e., Concrete Class)	<p>This field should be populated with the appropriate Mix Design Approval Material Code.</p> <p>This is a data check field; Material Code must exist and must be actively produced by the P/S.</p> <p>This field should be selected on the Spreadsheet by the Contractor (by selecting the Concrete Class). The Concrete Class will drive the assignment of both the Material Code and Concrete Class (i.e., they are the same for this discipline).</p> <p><Header.Material Code></p>
Design Type (dsn_t)	<p>Identifies the type of mix design. This is automatically populated as Portland Cement Concrete.</p>	Code Table	Auto-populated by Spreadsheet	<p>Always assigned as PCC for this discipline.</p> <p><Header.Sample Design Type ></p>

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Producer Supplier Code (prodr_supp_cd)	The transportation agency-defined Producer/Supplier (P/S) Code for a source/location of the Plant that is going to produce the Mix Design.	Free-form	End-User	This is a data check field; P/S must exist and must be active. <Header.Producer/Supplier Code>
Designer Name (dsnr_nm)	The name of the designer responsible for the Portland Cement Concrete mix. This is the Concrete Plant Technician that designed the mix.	Free-form	End-User	This is the SiteManager User ID of the person submitting the Mix Design for Approval. The Concrete Plant Designer must have KRMCA Level II qualifications (and therefore have a SM User ID). <Header.Mix Designer (SM User ID)>
Concrete Class Type (conc_clas_t)	Type of concrete (e.g., Class A, Class AA, etc.).	Date	End-User	This field should be selected on the Spreadsheet by the Contractor (by selecting the Concrete Class). The Concrete Class will drive the assignment of both the Material Code and Concrete Class (i.e., they are the same for this discipline). <Blank Design.Concrete Class>
Effective Date (effdt)	Effective date for the Portland Cement Concrete mix.	N/A	Auto-populated by Applet	System Date when the spreadsheet is imported into SM.
Termination Date (term_dt)	Date the Portland Cement Concrete mix is no longer available for use. KYTC will manually populate this field if a Mix Design can no longer be used.	Date	Auto-populated by Spreadsheet	Initialize with no termination date (i.e., "00/00/00"). <Header.ZERO>
Approved Date (apprd_dt)	Identifies when the Portland Cement Concrete mix was approved.	Code Table	Auto-populated by Spreadsheet	System Date when the spreadsheet is imported into SM.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Approved By User ID (apprd_by_uid)	The person who approves the PCC mix.	Free-form	KYTC Spreadsheet Approver	This is the KYTC person approving the spreadsheet. The KYTC Approver must have KRMCA Level II qualifications (and therefore have a SM User ID). <Header.Approver SM User ID>
Last-Modified User ID (last_modfd_uid)	Last user to modify the sample record.	Free-form	KYTC Spreadsheet Approver	This is the KYTC person approving the spreadsheet. <Header. Approver SM User ID>
Last-Modified Date (last_modfd_dt)	Date of the last modification made to the sample record.	Date	Auto-populated by Applet	System Date the sample was successfully imported into SiteManager.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

PROPERTIES FOLDER TAB (t_pcc) – NOT USED BY THE APPLLET

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Mix ID (mix_id)	The ID for the Portland Cement Concrete mix design. - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Min Average Strength Required (min_avg_strgh_rqrd)	Minimum strength of concrete required. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Design Strength Specified (dsn_strgh_spc)	Specified concrete strength. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Theoretical Unit Wt (theo_unt_wt)	Unit weight of mix as calculated from the concrete proportioning. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Theoretical Unit Wt Unit Type (theo_unt_wt_unt)	Unit of measure for theoretical unit weight. Required when Theoretical Unit Wt entered. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Water Cement Ratio (h2o_cem_ratio)	Ratio of total water content to total cement material per given volume of concrete. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Unit Weight Measured (unt_wt_m)	Unit weight of mix as calculated from the concrete proportioning. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Unit Weight Measured Unit Type (unt_wt_meas_unt)	Unit of measure for measured unit weight. Required when Unit Weight Measured entered. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Air Content Measured (air_cntnt_m)	Air content of freshly mixed concrete. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Slump Measured (slmp_m)	Slump of concrete after trail batch. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Slump Measured Unit Type (slmp_meas_unt)	Unit of measure for measured slump. Required when Slump Measured entered. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Remarks (rmrks_id)	ID used to store associated remarks. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

MATERIALS FOLDER TAB (t_pcc_bln) – **NOT USED BY THE APPLLET**

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Mix ID (mix_id)	The ID for the Portland Cement Concrete mix design. - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Design Type (dsn_t)	This identifies the type of mix. From this window, this is Portland Cement Concrete mix. - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Material Code (matl_cd)	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. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Brand Name (brnd_nm)	This is a freeform text field where the brand name of the component material may be entered. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Producer Supplier Code (prodr_supp_cd)	This is a freeform text field where the brand name of the component material may be entered. The producer/supplier full name for the highlighted producer/supplier will display to the right of the code. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Sample ID (smp_l_id)	The ID for a sample. Identifies the sample used to approve the material contained within the Portland Cement Concrete mix design. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Spfc Gravity (spc_gr)	Specific gravity of the material within the Portland Cement Concrete mix design. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Bulk Spfc Gravity (bulk_spc_gr_m)	Bulk specific gravity of the material within the Portland Cement Concrete mix design. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
SSD Weight (ssd_wt_m)	Weight of the material within the Portland Cement Concrete mix design needed to make one cubic yard total. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Absorption Percent (abs_p)	Percent of water the aggregate can absorb. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Fineness Modulus (fine_moduls_m)	Function of the grading of the fine aggregate. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Mass (mas)	The quantity of the material within the Portland Cement Concrete mix design. - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Unit Type (unt_t)	The unit of measure for the quantity of material within the Portland Cement Concrete mix design. Required when Mass entered - KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Last-Modified User ID (last_modfd_uid)	Last user to modify the sample record.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	Spreadsheet Data Type	Source of Data	KYTC Spreadsheet Population Decision
Last-Modified Date (last_modfd_dt)	Date of the last modification made to the sample record.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

GRADATION FOLDER TAB (t_mix_dsn_grdn) – **NOT USED BY THE APPLLET**

Field Name	Description	KYTC Population Procedure	Spreadsheet Data Type	Source of Data	Spreadsheet Population Decision
Mix ID (mix_id)	The ID for the Portland Cement Concrete mix design.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Design Type (dsn_t)	This identifies the type of mix. From this window, this is Portland Cement Concrete mix.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Material Code (matl_cd)	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.	KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Effective Date (matl_grdn_effdt)	The date the gradation specification becomes effective. Defaults to current date when a new set of material gradation specifications are created or copied.	KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Status (N/A)	Identifies the current status of this set of sieve size records based on the effective date (e.g., active or inactive). Status defaults to active.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field. This is not a database field; it is assigned programmatically by the SiteManager application.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	KYTC Population Procedure	Spreadsheet Data Type	Source of Data	Spreadsheet Population Decision
Sieve Size - Serial Number (matl_grdn_sn)	Serial Number identifying the sieve size record associated to this material. AASHTO and ASTM standard sieve sizes (e.g., 1/2, No. 4, etc.). Sieve size required when Minimum or Maximum entered.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field for this discipline.
Sieve Value Within Range (i.e., "**")	Displays asterisk if Sieve Value is not within the Minimum/Maximum Range.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field. This is not a database field; it is assigned programmatically by the SiteManager application.
Sieve Value (sv_val)	The percentage of bituminous mix passing through the sieve screen.	KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Minimum Range (N/A)	The beginning value for the gradation specification limit.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field. This is not a database field; it is assigned programmatically by the SiteManager application.
Maximum Range (N/A)	The ending value for the gradation specification limit.	N/A - Auto-populated.	N/A	N/A	Applet will not use this field. This is not a database field; it is assigned programmatically by the SiteManager application.
Min Production Tolerance (min_prod_tolrnc)	The minimum production tolerance value specification. This field is required when the Sieve Value field is populated.	KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.

KENTUCKY TRANSPORTATION CABINET

Kentucky TRNS*PORT Information Series

SiteManager Materials Module

PCC Mix Design Window – Concrete Mix Design Approval (CONCMIX) Spreadsheet

Field Name	Description	KYTC Population Procedure	Spreadsheet Data Type	Source of Data	Spreadsheet Population Decision
Max Production Tolerance (max_prod_tolrnc)	The maximum production tolerance value specification. This field is required when the Sieve Value field is populated.	KYTC will not use this field.	N/A	N/A	Applet will not use this field for this discipline.
Last-Modified User ID (last_modfd_uid)	Last user to modify the sample record.	N/A	N/A	N/A	Applet will not use this field for this discipline.
Last-Modified Date (last_modfd_dt)	Date of the last modification made to the sample record.	N/A	N/A	N/A	Applet will not use this field for this discipline.