



U.S. Department
Of Transportation

**Federal Highway
Administration**

Memorandum

6300 Georgetown Pike
McLean, Virginia 22101

Subject: **ACTION**: LTPP Directive IMS-133
Guidelines for Closeout of Pavement Performance Database

Date: June ²⁵21, 2007

From: Jack Springer *Jack Springer*
Long Term Pavement Performance Team

Reply to
Attn of: HRDI-13

To: Dr. Frank Meyer, PM - LTPP North Atlantic Regional Contract
Dr. Frank Meyer, PM - LTPP North Central Regional Contract
Mr. Mark Gardner, PM - LTPP Southern Regional Contract
Mr. Kevin Senn, PM - LTPP Western Regional Contract

Attached is the Long-Term Pavement Performance (LTPP) Program Directive IMS-133: Guidelines for Closeout of Pavement Performance Database. This directive provides guidelines on the procedures to be used to closeout modules in the Long-Term Pavement Performance (LTPP) Pavement Performance Database for delivery of the 20-year LTPP database anticipated for September 2009. Please ensure that all personnel involved with the IMS are aware of this new directive.

Should you have any questions or would like to discuss this directive, please do not hesitate to contact me at 202-493-3144.

Attachments (1)

FHWA:HRDI-13:JSpringer:mdeeney:493-3144:6/21/07

File: c:/mdeeney/directive/ims/I-133dir.doc

cc:

Dr. Gonzalo Rada

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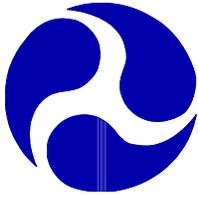
Linda Valencia-McDonald

Directive Binder

LTPP Team

Official file

Chron



LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For the Technical Direction of the LTPP Program

Program Area: IMS

Directive Number: I-133

Date: June 21, 2007

Supersedes: N/A

Subject: Guidelines for Closeout of Pavement Performance Database

This directive provides guidelines on the procedures to be used to closeout modules in the Long-Term Pavement Performance (LTPP) Pavement Performance Database for delivery of the 20-year LTPP database anticipated for September 2009.

Process Overview

The following is a general overview of the process to closeout database modules.

1. The initial schedule for closeout of data modules is contained in this directive.
2. The LTPP Technical Support Services Contractor (TSSC) or other FHWA designated entities will perform database module close-out studies.
3. Identified data issues requiring access to paper based and electronic raw data stored in the regional contractor offices will be identified using the Data Analysis Operations Feedback Report (DAOFR) process.
4. The TSSC will distribute DAOFR and other results to the LTPP team as the close-out studies are performed.
5. The TSSC will resolve the disposition of outstanding Software Performance Report (SPR) related to automated database Quality Control (QC) checks.
6. The Regional Support Contracts (RSC) will resolve issues identified in DAOFR or identified by other means.
7. The RSC will reset RECORD_STATUS=A for all tables in a database module being closed out and rerun automated QC checks. The RSC will then review QC results, resolve errors, perform manual upgrades and downgrades to RECORD_STATUS, and develop a final set of manual upgrade and downgrade scripts from this final QC process.
8. Interim extractions from the regional databases will be performed as indicated in the close-out schedule.
9. The RSC will perform final upload of database module.
10. The TSSC will review the upload and apply needed changes centrally.

After the above steps have been completed, a data module is considered frozen in the regional databases unless instructed otherwise by FHWA.

The following portions of this directive provide more details on these process steps.

Module Closeout Schedule

The database module closeout schedule shown in Table 1 contains the anticipated completion dates for formal data studies, last release of database QC programs, error resolution and resulting changes to the database, final QC processing, interim data upload, and final upload of data from the regional databases. FHWA may distribute changes to the schedule as needed.

Data Module Closeout Studies

The purpose of data module closeout studies is to perform a systematic review of the data to identify errors, inconsistencies in field population, suspect data anomalies, priority and suspect missing data, and for other purposes.

Results of data module closeout studies can be reported in the following ways:

- Data studies that generate more than 10 DAOFR on a single subject can be assigned a DAFOR designation that can be used to identify the database module. Sequences of DAOFR in this category can be sent directly to RSC from FHWA or LTPP contractors. LTPP contractors using this method to distribute DAOFR must provide a summary list of DAOFR to FHWA.
- Individual DAOFR can be prepared and submitted to FHWA following the DAOFR procedure specified in General Operations Directive GO-15 or its successor.
- Minor spelling issues and other inconsistencies that are most cost effectively corrected centrally can be reported to the TSSC contractor for central correction.
- All contractors receiving database action requests can notify FHWA if they have questions or concerns related to their ability to address the issue or the appropriateness of the request.

A formal data module closeout study may not be performed on all database modules. Tables in the administrative module will be reviewed after each upload. Review of the updated climate (CLM) module will be performed centrally.

QC Related SPR Resolution

The TSSC will address all unresolved SPR concerning database QC software prior to final QC processing by the RSC. During the final processing, the TSSC will resolve software issues on a priority basis.

Each issue will be evaluated to determine the appropriate level of resolution effort. For simple fixes or fixes that will affect a large number of records, the TSSC will likely correct the software and distribute the modified program to the RSC. However, if the anticipated cost to address a given

issue is more than that to change the software or if the required change only affects a small number of records, the QC software may not be changed. In these instances, affected RSC may be advised to make manual upgrades as necessary. Alternatively, depending on the extent of the problem, a central script can be written and distributed to the RSC to correct a QC program processing problem provided that the QC manual contains a reference to the check.

RSC Final Data Resolution and QC Process

- When performing manual upgrades to RECORD_STATUS as part of the QC process, comments for each manual upgrade are not required to be input into the Browser software or uploaded into the COMMENTS_REVIEW table.
- Comments regarding significant data related issues shall be input into the COMMENTS_GENERAL table following the guidelines contained in IMS Directive I-134.
- The RSC shall create a final set of manual upgrade scripts to be submitted to FHWA for inclusion the Auxiliary Information Management System (AIMS).

Interim Extractions

The scheduled interim extractions in some cases provide the TSSC an opportunity to review appropriateness of changes in response to closeout data studies. In other instances the interim extraction represents a freeze to regional databases and any further changes or additions to the data module after that date must be made centrally by the TSSC.

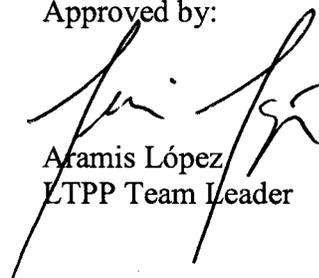
Final TSSC Review and Updates

After the final upload of a module:

- TSSC review will consist of checks on appropriate corrections of issues identified in DAOFRs or by other means.
- The data module will be frozen in the regional databases. Needed corrections or changes to contents of the database will be performed in the central database by the TSSC staff. When necessary, RSC staff will be contacted to clarify or confirm needed changes.

Prepared by: TSSC

Approved by:



Aramis López
LTPP Team Leader

Table 1. Pavement performance database closeout schedule.

Module/Tables	Completion Dates						Notes
	Close-Out Data Study	Final QC Release	Resolve Data Issues	Database QC Processing	Interim Review Extraction	Final Upload and Region DB Freeze	
Dynamic Load / DLR_*	NA	NA	NA	NA	NA	NA	Weaver study final data review; TSSC update CN centrally
Backcalculation/ MON_DEFL_FLX_* MON_DEFL_RGD_*	NA	NA	NA	NA	NA	NA	Frozen with Data Release 19 – no updates
Inventory/ INV*	03/01/07	06/01/07	06/30/07	08/01/07	NA	08/07/07	
Monitor/ MON_DRAIN_*	06/05/07	06/01/07	06/30/07	08/1/07	NA	08/07/07	Close-out study performed after 2006 upload
SPS/ SPS*	06/01/07	06/10/07	10/26/07	01/25/08	02/03/08	08/05/08	
Monitor/ MON_RUT	07/20/07	08/01/07	09/30/07	12/15/07	02/03/08	08/05/08	
Monitor/ MON_DIS_PADIAS*	08/15/07	09/15/07	10/30/07	12/01/07	12/17/07	08/05/08	Ecompx performs close-out data study, review of available manual distress surveys also included
SMP / SMP_*	08/25/07	11/15/07	12/21/08	02/02/08	03/17/08	08/05/08	TSSC load, QC, and update new moisture and frost CP tables centrally.
Rehabilitation/ RHB*	11/30/07	01/31/08	03/21/08	05/23/08	05/27/08	08/05/08	
Monitoring / MON_PROFILE_*	12/21/07	01/31/08	04/18/08	05/23/08	05/27/08	08/05/08	TSSC load profile measurements performed after August 5, 2008 upload.
Monitor/ MON_FRICTION	01/31/08	02/31/08	03/17/08	04/28/08	06/19/08	08/05/08	TSSC load and process friction data not included in the 2008 upload

Table 1. Pavement performance database closeout schedule. (Continued)

Module/Tables	Completion Dates						Notes
	Close-Out Data Study	Final QC Release	Resolve Data Issues	Database QC Processing	Interim Review Extraction	Final Upload and Region DB Freeze	
Traffic Monitoring / Out-of-Study sections in the traffic database as of July 1, 2007	01/29/08	02/17/08	07/04/08	07/25/08	NA	08/05/08	Needed changes to this data performed by TSSC after August 2008 upload. Traffic monitoring data is a no manual upgrade process.
Monitor / MON_DEFL_*	02/17/08	02/31/08	05/27/08	08/25/08	11/25/08	02/03/09	
Traffic/ TRF_HIST_*	11/21/08	11/21/08	01/20/09	01/30/09	NA	02/03/09	Small amount of corrections anticipated
Traffic / TRF_CALIB*, TRF_EQUIP*, TRF_BASIC_INFO	10/17/08	11/21/08	01/20/09	01/30/09	NA	02/03/09	
Traffic Monitoring / Other Sections	11/14/08	11/21/08	07/24/09	08/03/09	02/03/09	08/04/09	Data from August 2008 upload included in the final data study
Materials / TST_*	12/05/08	11/21/08	07/03/09	07/25/09	02/03/09	08/04/09	
Automated Weather Station/ AWS_*	12/12/08	11/21/08	07/03/09	07/25/09	02/03/09	08/04/09	
Monitor / MON_DIS_AC_REV MON_DIS_CRCR_REV MON_DIS_JPCP_* Other MON_DIS*	02/20/09	02/20/09	07/03/09	07/27/09	NA	08/04/09	Manual distress data
Traffic / TRF_MON_EST_ESAL	04/01/09	04/01/09	07/24/09	08/03/09	NA	08/04/09	
Maintenance/ MNT*	04/17/09	05/01/09	07/17/09	07/27/09	NA	08/04/09	