



U.S. Department  
Of Transportation

Federal Highway  
Administration

# Memorandum

6300 Georgetown Pike  
McLean, Virginia 22101

Subject: **ACTION:** LTPP Directive IMS-148  
IMS Software Release Version 2010.07

Date: July 27, 2010

From: Jane Jiang   
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-148: IMS Software Release Version 2010.07. This directive authorizes implementation of the IMS software upgrade from version 2010.01 to 2010.07. Please ensure that all personnel 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 202-493-3149.

Attachments (3)

FHWA:HRDI-13:JJiang:mdeeney:493-3149:7/27/10

File: c:/mdeeney/directive/ims/IMS-148dir.doc

cc:

Jonathan Groeger

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-148

**Date:** July 27, 2010

**Supersedes:** I-146

**Subject:** IMS Software Release Version 2010.07

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This directive authorizes implementation of the IMS software upgrade from version 2010.01 to 2010.07. Upgrade instructions are provided in Attachment 1. Please notify the FHWA and TSSC when the upgrade has been installed.

Software Change Notice 106, contained in the file, SCN\_106.pdf, lists all of the changes made to the IMS software since the last software release. This notice shall be filed in the Operator's Log.

This software update contains new table comments for the TRF\_MEPDG tables and updates to the dba utility section maintenance utility (SECTMANT.EXE) to process the TST\_ESTAR tables. New batch files to run the section maintenance utility have also been included: SECT\_MNT\_Delete for section deletions and SECT\_MNT\_Update for section updates. New data for the TST\_PC03 and TST\_SS04\_UG08 tables is included, as well as an update in the Foreign Key constraint between TST\_AC01\_LAYER and TST\_L05B. In order to apply the new FK constraint, orphan records will have to be identified and updated or removed. The Software Change Notice lists these and other miscellaneous changes.

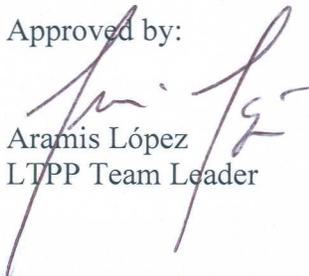
The software update for Version 2010.07 is distributed in a master zip file, SoftwareRelease201007.zip. This file may be downloaded from the VR2010\_07 directory on the ltp.org ftp site.

The following files are contained in the master file:

- VR2010\_07.ZIP – A zip file with the batch file (VR2010\_07.BAT) and scripts needed to make miscellaneous updates to the database and to run other related administrative commands. Refer to the table included in Attachment 1 for an alphabetic list and descriptions of the scripts called by this batch file. Two additional scripts are run separately (see instructions).
- LTPP.ZIP - A zip file with all files to go in the LTPP area (and subdirectories) on the server.
- OracleVersions.ZIP – A zip file with listings of all Oracle files and versions loaded on the server at the central site. These are included for reference only.

Prepared by: TSSC

Approved by:

  
Aramis López  
LTPP Team Leader

# Attachment 1

## Instructions to Apply VR 2010.07 Release

1. Create the subdirectory RELEASES\VR2010\_07.
2. Copy and unzip the VR2010\_07.zip file into the subdirectory created in step 1.
3. Shutdown ORACLE in normal mode and backup Server.
4. Bring ORACLE up.
5. Run the script to identify orphans in the TST\_AC01 table, as follows:  

```
sqlplus ltpdba/dbapw@imsprod @SPR3882_FindAC01LayerOrphans
```

Review .lis file and remove/update orphan records.
6. Repeat step 5 until there are no more orphan records identified.
7. Verify that there is a tst\_pc03\_r#.dmp file for your region in the release directory. From the DOS prompt in the RELEASES\VR2010\_07 directory, regions type:  

```
VR2010_07 dbausername/dbapassword@instance #
```

where # is the number of your region. The batch file will run the scripts listed alphabetically in Table 1, below.
8. The scripts will update existing table comments, codes and data. **Check carefully that the scripts completed successfully by reviewing the \*.lis files (refer to list, below).** Ignore errors about dropping non-existent objects.
9. To complete the TST\_PC03 processing, do the following:
  - a. Run AssignCN on the TST module
  - b. Run TST QC to QC the data in the PC03 table
  - c. At a DOS prompt in the release directory, recreate the FK constraint between PC03 and L05B by typing:  

```
sqlplus ltpdba/dbapw@imsprod @SPR3888_RecreatePC03L05BFK
```
  - d. Review the SPR3888\_RecreatePC03L05BFK.lis file in the release directory to verify that the constraint was created successfully
10. Copy the LTPP.ZIP file into the LTPP subdirectory. Right-click on the filename and choose "Extract to Here" to unzip the file into the LTPP subdirectory. Answer "Yes to all" to overwrite existing files. Delete the LTPP.ZIP file.
11. The OracleVersions.zip file is included for reference only. Extract these files into the OracleVersions directory. It will create an OracleVersions\VR201007 subdirectory.

**Table 1. Scripts run from the VR2010\_07.bat file**

<b>Script and Output Filenames (.sql &amp; .lis)</b>	<b>Description</b>
SPR3881_UpdateMEPDGTableComments	Creates new comments without carriage return for the MEPDG tables.
SPR3882_UpdateAC01LayerL05BFK	Creates a new constraint between TST_AC01_LAYER and TST_L05B that relates the "LAYER_NO" field in each table.
SPR3888_InsertAggClassCodes	Inserts new AGG_CLASS codes required by the updated PC03 data.
SPR3888_TruncatePC03Table	Truncates TST_PC03 table before data reload.
TST_SS04_UG08_New_Records_R#	Inserts new records into the TST_SS04_UG08 table for each Region, where # = 1 - 4

# Software Change Notice 106

REG #	SAIC #	Program Name	Referred To	Date Rec	Date Comp
<b>Administrative</b>					
1-148	3887	AdminQC.exe		6/17/2010	6/18/2010
<b>Description</b>			<b>Resolution</b>		
<p>The QC checks were run (all levels) with no sections flagged in the output files.</p> <p>When reviewing the SECTION_COORDINATES table, we discovered 12 records did not pass Level C.</p> <p>Attached are the output from the level D QC checks and the records that are at level 'C'.</p>			<p>QC was run again in Regions 1 &amp; 2 and the records were updated as expected. SPR closed with no further action.</p>		
M-3881	3881	Table Comments		1/4/2010	4/19/2010
<b>Description</b>			<b>Resolution</b>		
<p>The table comments that were provided with the MEPDG creation scripts have a Carriage Return in them. These comments are pulled into LTPPTD and subsequently used for Table Navigator.</p>			<p>Correct Table Comments and LTPPTD for TRF_MEPDG_* tables. Created SPR3881_UpdateMEPDGTableComments.sql.</p>		
<b>Database Administration</b>					
S-3880	3880	Sectmant.exe and Laymant.exe		1/21/2010	6/30/2010
<b>Description</b>			<b>Resolution</b>		
<p>Update both sectmant and laymant utility programs to work properly with Estar tables, most of which do not have state_code and shrp_id.</p>			<p>laymant.exe did not require updates. sectmant.exe was updated to remove/update related records from/in the TST_ESTAR tables. In addition, the deletion from the AWS tables was removed since that action could cause orphans. Deletions from the AWS tables will have to be handled manually when necessary. The program now determines what type of section is being updated/deleted or if the section id is not found in EXPERIMENT_SECTION. Sectmant.exe, SECT_MNT Delete.bat, SECT_MNT_Update.bat, disable_constraints.sql, enable_constraints.sql</p>		

REG #	SAIC #	Program Name	Referred To	Date Rec	Date Comp
<b>Materials Testing</b>					
M-3882	3882	TST_AC01_LAYER FK constraint		2/3/2010	6/28/2010
<b>Description</b>			<b>Resolution</b>		
<p>The current FK for TST_AC01_LAYER to TST_L05B matches field_layer_no to layer_no. The FK should link the two layer_no fields instead. A dozen or so records in TST_AC01_LAYER currently do not have a match in TST_L05B, and that is how I noticed this.</p>			<p>Created script (SPR3882_UpdateAC01LayerL05BFK.sql) to create the updated FK constraint. However, parent records do not exist in L05B for some of the AC01_layer records. So, another script was created (SPR3882_FindAC01Orphans.sql) to identify records that have no match.</p>		
M-3888	3888	TST_PC03 Table		6/30/2010	7/1/2010
<b>Description</b>			<b>Resolution</b>		
<p>Received new CTE data from FHWA. This will be a complete replacement of the TST_PC03 table. Also, new codes are required. Also, recreate FK_TST_PC03_L05B constraint once new data is in the TST_PC03 table.</p>			<p>Imported the new TST_PC03 data into the Oracle database, ran AssignCN, QC, corrected data problems and reprocessed until data was correct. Set Record_status = 'A' and exported data for each region. Created script SPR3888_RecreatePC03L05BFK.sql to recreate the FK constraint between PC03 and L05B tables. SPR3888_TruncatePC03Table.sql; SPR3888_InsertAggClassCodes.sql; tst_pc03_r#.dmp/log;</p>		
M-3889	3889	TST Data		6/30/2010	7/1/2010
<b>Description</b>			<b>Resolution</b>		
<p>Provide insert statements for new records for the TST_SS04_UG08 table.</p>			<p>Created individual sql scripts for each region with insert statements for this table. SPR3889_TST_SS04_UG08_New_Records_R#.sql</p>		

REG #	SAIC #	Program Name	Referred To	Date Rec	Date Comp
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Traffic
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M-3866      3866      Traffic Data

5/27/2009      4/21/2010

**Description**

Refer to SPR 3854 (1-146T) for background. Solution for traffic on both sides of the road appears to be to use the section\_id of the first section on the opposite side to identify traffic data in that direction of travel. Project\_id will still be used to identify traffic on primary side of the road. To implement this change, traffic data imported into the PPDB will have to be updated before the data release and all LTAS tables/programs will be updated after the data release.

**Resolution**

Before SDR24:

1. Update records in PPDB TRF\_% tables that have SHRP\_ID like 'O%' to the SHRP\_ID of the first section on the opposite side of the road in the direction of travel. This will include the TRF\_MEPDG tables which will be provided by MACTEC before the data release.

After SDR24:

2. Distribute data changes with next PPDB software release.
3. Determine data/code corrections to be made to LTAS tables
4. Make changes to data/code in LTAS
5. Distribute code and data changes in next LTAS release

Complete with LTAS release 1.8: #3,4 - LoadInfo.cpp, function initialRecord modified. Add check for the four sites to be excluded from the site to project conversion.