Configurations For Consultant CADD\IT Managers

Tennessee Department of Transportation

Design Division

T.D.O.T. Design Division V8 Configurations for Consultant CADD\IT Managers

1. Introduction

Information in this document is based on the following software versions: MicroStation V8 2004 Edition (08.05.02.35), Geopak 2004 Edition (08.05.02.35), and Office 2003 (with Office SP1).

This document is intended as a guide for consultant CADD managers or IT personnel to use when setting up configurations for their personnel to apply T.D.O.T. Design Division standard files on their computer systems.

Geopak's Dependency on MicroStation

The T.D.O.T. Design Division standard files for Geopak will not function correctly when downloaded by themselves. MicroStation standard files must be downloaded as well. Those files contain configurations, programs and other files called by various Geopak standard files.

.

2. Configuration Files

The Design Division at T.D.O.T. uses configurations set at a default level. In other words they are always in place by default. Since consultants do project work for various customers this may not work for them. This section describes ways of dealing with this issue and shows additional configurations that will need to be set to maintain functionality of the standard files in the software.

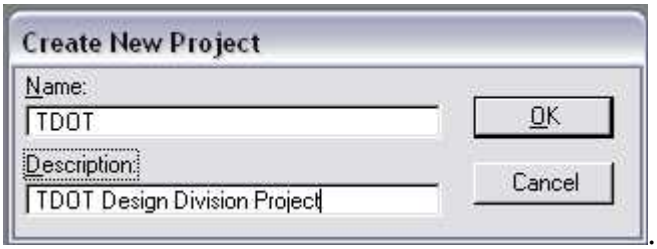
MicroStation & Geopak - TDOT.cfg

Default settings in TDOT.cfg:

```
#------------------------------------------------------------------------------------------------#
# TDOT.cfg - TDOT Microstation Standards Configuration File for Microstation V8 #
#------------------------------------------------------------------------------------------------#

#=====================================================#
# This file sets Microstation configurations          #
# for TDOT's Use                                      #
# Any changes made to this file may prevent access to #
# TDOT's standards.                                   #
#=====================================================#

# Microstation #

MS_CELLLIST                  < C:\Program Files\Bentley\Workspace\system\cell\STDS.CEL
MS_CELL_SEEDFILE  < c:\program files\bentley\workspace\system\seed\English2dCell.dgn
MS_COMPRESS_OPTIONS      = -ALL
MS_DESIGNMODELSEED       < c:\program files\bentley\workspace\system\seed\seed2d.dgn
MS_DESIGNSEED            = c:\program files\bentley\workspace\system\seed\seed2d.dgn
MS_FULLPATHINTITLEBAR    = 1
MS_PLOTDLG_DEF_PENTABLE < C:\Program Files\Bentley\Workspace\System\plotdrv\TdotPlot.tbl
MS_REMAP_CSVFILE         < C:\Program Files\Bentley\Workspace\System\data\TDOTV8main.csv
MS_UPDATE_KEEP_UNUSED_LIBRARY_LEVELS = 1
MS_V7TOV8_CSVNAME        = C:\Program Files\Bentley\Workspace\System\dgnlib\TDOTV8mainOnTheFly.csv
MS_V7_LEVEL_NAME_PREFIX = Level
MS_PENTABLE_DATE_FORMAT=%c

MS_TDOTDGNLIB_PATH       = C:\Program Files\Bentley\Workspace\System\dgnlib\

%lock MS_DESIGNSEED

# Geopak #

GPK_FORCE_ALLCFGVARS = 1

GPK_ACBOOK_DDBFILE       < C:\Program Files\GeopakStandards\tdot.ddb
GPK_SURVMNGR_SMDFILE   < C:\Program Files\GeopakStandards\TNDOT.smd
GPK_VISUALPREF_SMD       < C:\Program Files\GeopakStandards\TNDOT.smd
GPK_VISUALPREF_PLOTSCALE = 50.00000

GPK_DC_3PCDIR                < C:\Program Files\GeopakStandards\3PC\

GPK_MY_CRITERIADIR       < C:\Program Files\GeopakStandards\criteria\
GPK_TYPICAL                  < C:\Program Files\GeopakStandards\criteria\
GPK_TYPICAL_EDITOR       < C:\WINDOWS\system32\write.exe

GPK_SUPER_PREFDIR        < C:\Program Files\GeopakStandards\
GPK_SUPER_EDIR               < C:\Program Files\GeopakStandards\
GPK_SUPER_LENGTHDIR      < C:\Program Files\GeopakStandards\

GPK_LABELER_PLANSTYLEFILE = c:\Program Files\GeopakStandards\tdotdef_plan.lsf
GPK_LABELER_XSSTYLEFILE = c:\Program Files\GeopakStandards\tdotdef_xs.lsf
GPK_LABELER_PROFSTYLEFILE = c:\Program Files\GeopakStandards\tdotdef_prof.lsf
```

Setting Up TDOT.cfg as a project level configuration

Go to MicroStation Manager and in the Project field at the bottom pick **New**. In the **Create New Project** dialog enter the desired project name and description. Click **OK** to set up the project.



When a project is created, a project level configuration file is generated using the project name with a pcf extension. In our example this file would be named TDIOT.pcf.

Note: Since the Design Division at T.D.O.T. uses several default search paths from MicroStation's own configurations they are not set in TDOT.cfg but will need to be set in the project configuration file.

Default settings in TDOT.pcf.

```
#============================================================
# Project Configuration File - $Revision: 1.3 $
#============================================================

_USTN_PROJECTDESCR = TDOT Design Division Project

#------------------------------------------------------------------------
#  Set search paths.
#------------------------------------------------------------------------
MS_DEF                  < $(_USTN_PROJECTDATA)dgn/
MS_CELL                 < $(_USTN_PROJECTDATA)cell/
MS_CELLOUT              = $(_USTN_PROJECTDATA)cell/
MS_CELLLIST             < $(_USTN_PROJECTDATA)cell/*.cel
MS_CELLSELECTORDIR      = $(_USTN_PROJECTDATA)cell/
MS_SEEDFILES            > $(_USTN_PROJECTDATA)seed/
MS_SYMBRSRC             > $(_USTN_PROJECTDATA)symb/*.rsc
MS_SETTINGSDIR          < $(_USTN_PROJECTDATA)data/
MS_SETTINGSOUTDIR       = $(_USTN_PROJECTDATA)data/
MS_DGNLIBLIST           < $(_USTN_PROJECTDATA)DGNLIB/

%lock MS_DESIGNMODELSEED
%lock MS_SHEETMODELSEED
%lock MS_DWGMODELSEED
%lock MS_DESIGNSEED
```

Open TDOT.cfg, copy its contents and paste them in the project configuration file at the end.

Eliminate duplicate settings from the default project configuration file definitions.

```
MS_CELLLIST             < $(_USTN_PROJECTDATA)cell/*.cel
%lock MS_DESIGNSEED
```

Delete any you may not need.. MS_DEF is only needed if all MicroStation DGN files are to be kept in a single location. T.D.O.T. Design Division doesn't use MicroStation settings files or multiple DGNLIB files together. The %lock function locks the current definition and should always be placed at the end of the file but no models other than the default model is used.

```
MS_DEF                  < $(_USTN_PROJECTDATA)dgn/
MS_SETTINGSDIR          < $(_USTN_PROJECTDATA)data/
MS_SETTINGSOUTDIR       = $(_USTN_PROJECTDATA)data/
MS_DGNLIBLIST           < $(_USTN_PROJECTDATA)DGNLIB/

%lock MS_DESIGNMODELSEED
%lock MS_SHEETMODELSEED
%lock MS_DWGMODELSEED
```

Add additional configurations as needed. The following additions are recommended.

MS_CUSTOMUNITDEF	unit definition file with path
MS_DATA	data folder search path
MS_LEVEL_LIB_DIR	data folder search path for level mapping files
MS_MACRO	macros folder search path
MS_MDL	mdl program folder search path (should only be prepended or appended)
MS_VBASEARCHDIRECTORIES	vba program folder search path

Reset all paths as needed for your system. This can be done simply by replacing the specified locations with yours or by setting up your own configuration variables for these to avoid extra editing later if locations change. If you use these they should be placed at the top of the file.

Examples:

TDOTV8 = H:/standards/tdot/microstation/v8/

TDOT_GPKV8 = H:/standards/tdot /geopak/v8/

A variable definition can contain references to other variables. References to other variables are made with the following syntax:

Reference	**Meaning**
$(VARIABLEREF)	Expand VARIABLEREF when this variable is *used*.
${VARIABLEREF}	Expand to *current value* of VARIABLEREF.

For example, consider configuration variable TDOTV8 with the definition "H:/standards/tdot/microstation/v8/".

$(TDOTV8)vba/	expands to "H:/standards/tdot/microstation/v8/ vba/"
$(TDOTV8)seed/seed2d.dgn	expands to "H:/standards/tdot/microstation/v8/ seed/seed2d.dgn "

Use the basic guidelines described on the following page to finalize the configuration definitions in the project configuration file. Copy this file to the Projects folder under the MicroStation product directory for application at other locations. It is not necessary to define the project folder unless you plan to keep standard files there.

Basic Editing of Configuration Files (from MicroStation Help)

Configuration variable files are text files that consist of a series of lines. Each line contains a configuration variable name and definition in the following syntax:

<VARIABLENAME> <operator> <new_value> # comment

VARIABLENAME is the name of the configuration variable defined. Nearly all variable names used by MicroStation begin with "MS_" or "_USTN_." Variables whose names begin with an underbar (_) are not displayed in the Configuration dialog box.

Available values for operator are as follows:

Operator	Meaning
=	Assign new_value to VARIABLENAME.
+	Append new_value to current value of VARIABLENAME. Uses a space as a separator.
>	Append directory or file lists defined by new_value to a variable definition that defines a path. If no current value for VARIABLENAME exists, this is equivalent to the = operator. Otherwise, it appends a path separator character, a semicolon (;), and then new_value.
<	"Prepend" directory or file lists defined by new_value (to the beginning of) a variable definition that defines a path. If no current value for VARIABLENAME exists, this is equivalent to the = operator. Otherwise, it prepends new_value followed by a path separator character, a semicolon (;).
#	Anything after a # on a line is treated as a comment and is ignored.

File path names should be entered using the forward slash (/). Windows converts all forward slashes (/) in new_value to backslashes (\). Also, all directory definitions should end with a trailing forward slash.

This is an example of a valid directory definition:

MS_DEF = /network/dgn/

When editing a configuration variable file, insert a carriage return at the end of the last line to ensure the entire file will be processed. Press <Enter> to insert a carriage return.

Note:

Through our experience at T.D.O.T., setting a literal path name with backslashes will work fine but should end with a backslash when setting a search path. If you plan to use a configuration variable in the definition you **must** use forward slashes.

Interplot Client - Iplot.cfg, Iplotsrv.cfg & ip.cfg

These are software product level configuration files that have been customized for use by T.D.O.T. Design Division personnel. They are rather large files, so listed below each filename are configurations of particular interest that may need to be reset for your system.

Iplot.cfg (Location: C:\Program Files\Common Files\InterPlot\IPLOT\config)

```
IPLOT_OUTPUT_DIR = c:\temp
IPLOT_DLOG_OUTPUT_DIR = c:\temp
IPLOT_DLOG_SAVE_DIR = c:\temp

IPLOT_COLOR_TABLE_PATH = "c:\program files\bentley\workspace\system\data"
IPLOT_PEN_TABLE_PATH = "c:\program files\common files\interplot\iplot\misc"
```

Iplotsrv.cfg (Location: C:\Program Files\Common Files\InterPlot\IPLOT\config)

```
# IPLOTSRV_PATTERN_PATH contains the directories that will be searched
# for the filenames specified by IPLOTSRV_PATTERN_LIB_LIST.

IPLOTSRV_PATTERN_PATH =
IPLOTSRV_PRODUCT_DIR\resrc\custom;$IPLOTSRV_PRODUCT_DIR\resrc\system
IPLOTSRV_PATTERN_LIB_LIST = pat100.plb,100;pat300.plb,300;pat400.plb,400;pat600.plb,600
```

ip.cfg (Location: C:\Program Files\InterPlot Client\config)

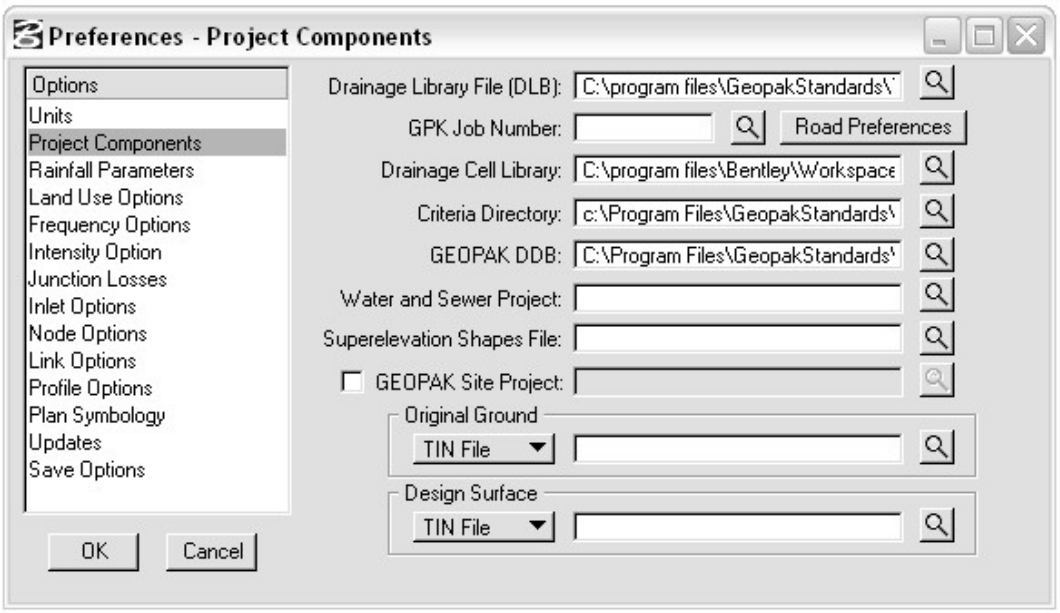
```
IP_SETTINGS_PATH = "c:\program files\interplot client\settings"

IP_DEFAULT_SETTINGS = iplot.set
```

3. Hard Coded File Paths

Although hard coded file paths e avoided wherever possible some standard files will not function correctly without being set this way. The following section lists the various standard files grouped by software type that have hard coded file paths.

Geopak

DrainageProject.gdf (drainage project) drainage library, cell library, criteria directory, Geopak DDB



To edit:
Start Geopak Drainage
Go to Drainage>Project>Open
Navigate to Geopak standards folder and open DrainageProject.gdf
Go to Drainage>Project>Preferences
Under Project Components make path changes as needed
Click OK to close Preferences dialog
Go to Drainage>Project>Save

Office

ConvertExcelToV8.xlt Excel macro & template access

from module **ConvertMenu**
subroutine **CreateConvertMenu**

```
.OnAction =
"C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets\ConvertExcelToV8.xlt!ProcessSelection"
```

from module **ConvertEstimatetoV8**
subroutine **ConvertEstToV8**

```
Workbooks.Add Template:= _
   "C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets\EstimatedRoadwayQuantities.xlt"
```

EstimatedRoadwayQuantities.xlt, item number & description file\path
BridgeQuantities.xlt, MaintQuantities.xlt

from form code **SearchForText**
subroutine **UserForm_Initialize**

```
Open "C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets\Items.dat" For Input Shared As #1
```

from module **datfilchecks**
subroutine **CheckforDat**

```
.LookIn = "C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets"
   .SearchSubFolders = False
   .Filename = "items.dat"
   If .Execute() > 0 Then
      datdate = FileDateTime("C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets\Items.dat")
```

subroutine **checkforTxt**

```
.LookIn = "C:\Program Files\Microsoft Office\Templates\TDOT 2nd Sheets"
   .SearchSubFolders = False
   .Filename = "items.dat.txt"
   If .Execute() > 0 Then
      txtdate = FileDateTime("C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt")
```

subroutine **dattxt**

```
FileCopy "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt",
            "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\Items.dat"
   Kill "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt"
Else
   'MsgBox "dat date more recent than txt date"
   Kill "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt"
```

subroutine **DateCheck**

```
datdate = FileDateTime("C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\Items.dat")
```

subroutine **TxtCopy**

```
FileCopy "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt",
      "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\Items.dat"
  Kill "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\items.dat.txt"
```

from module **FillIn_Items**
subroutine **FillinItemNos**

```
Open "C:\Program Files\Microsoft Office\Templates\tdot 2nd Sheets\Items.dat" For Input Shared As #1
```

To edit:
Open Excel template
Go to Tools>Macro>Visual Basic Editor
In Editor navigate to module & subroutine
Make changes as needed
Click Save icon in Visual Basic Editor

Note: Due to the many instances of the same folder path in ***Quantities.xlt** templates a faster method might be to use the Replace function under Edit>Replace in the Visual Basic Editor as shown below.