

Design Services Update

11/4/2015

Update Highlights

- Recent updates to the Development Guide.
- Updated Engineer of Development in all sheet borders from Mark Van Port Fleet to Brad Wieferich.
- Updated plan sheet order to reflect changes in Road Design Manual.
- Updated all horizontal alignments to include a 50 scale option.
- Resolved bug in the “Ground Point Profile” tool involving the presence of multiple station equations.
- Revised one existing Civil Cell and added two new Civil Cells.
- Updated Superelevation Worksheet to address situations involving station equations and regions, where the station equation may not fall on the PT of a curve.
- Added new features for driveway curb & gutter (Detail L, Detail M, Radii), Shoulder Gutter, Spillway, Concrete Pavement Repair, Concrete Steps, and Sidewalk Landing & Ramp, for future Civil Cell development.
- Added configuration variable to display user created civil cells in the civil cell selection menu.
- Added a GEOPAK Drainage profile preference file for existing storm sewer systems.
- Updates to Structure levels & filters in order to improve clarity, based in part on user feedback.
- Reassigned the CLIP survey feature from existing level "Terrain_Ex_Source_Boundary_GS~" to new level "Terrain_Ex_Clip_Boundary_GS~", in order to prevent the CLIP boundary and terrain boundary from using the same level.
- Added level remap file to revert surveys from the 02 to 01 workspace.

Links to Previous “Design Services” & “MDOT 02 Workspace” Update Memos

Web: http://www.michigan.gov/mdot/0,4616,7-151-9625_21540_36037_69214---,00.html

Currently Supported CADD Software

MDOT_01 Workspace + Power GEOPAK V8i SS2 - 08.11.07.566 + Windows 7:

- Updates are no longer being made to the MDOT_01 Workspace.
- Projects currently underway in SS2/MDOT_01 should remain in this Workspace.

MDOT_02 Workspace + Power GEOPAK V8i SS3 - 08.11.09.722 + Windows 7:

- The MDOT_02 Workspace is not backward compatible with SS3 Version 08.11.09.493.
- Utilization of SS3/MDOT_02 is optional at this time.
- Consultants who wish to use SS3/MDOT_02 should first obtain consent from their MDOT Project Manager.
- MDOT employees will need to contact MDOT-PowerGEOPAKSupport@michigan.gov to request installation.
- The MDOT_02 Workspace is available for download by consultants at the following link:

http://www.michigan.gov/mdot/0,4616,7-151-9625_21540_36037-259870--,00.html

Consultant installation instructions are located in the “C:\MDOT_02 Workspace\1_Install” folder.

GEOPAK Civil Engineering Suite:

For consultants who choose to install “Geopak Civil Engineering Suite” in place of “Power Geopak”, please note that the following combination of software versions is required:

MicroStation V8i (SS3)	08.11.09.608
GEOPAK Civil Engineering Suite V8i (SS3)	08.11.09.722
GEOPAK Civil Engineering Suite V8i (SS2)	08.11.07.615*

* Note that the version of MicroStation SS3 listed above is fully backward compatible with Civil Suite SS2 and this is the only version of MicroStation SS3 that supports both versions of Civil Suite listed above.

Dual Workspace Installation Procedure:

The procedure for dual installation of both the MDOT_01 and MDOT_02 Workspace with “MicroStation / GEOPAK Civil Engineering Suite” is presented in a document titled “_MDOT_0201 Geopak CivilSuite Workspace Installation Procedure.doc”, which is located in the MDOT_02 Workspace at “M:\MDOT_02 Workspace\1_Install\Resource Files\CivilSuite Configuration”. Any questions regarding the installation process should be directed to MDOT-CADDSupport@michigan.gov.

Note: If installing only the MDOT_02 Workspace, the following procedure may be used to manually modify the “MDOT_02 / Power GEOPAK SS3” installation process for use with “MDOT_02 / MicroStation SS3 / GEOPAK Civil Engineering Suite SS3”:

1. Follow and complete the Power GEOPAK installation procedure.
2. Relocate the “MDOT_02_Local.ucf” and/or “MDOT_02_Server.ucf” files as shown below:
From Here: C:\ProgramData\Bentley\PowerGEOPAK V8i (SELECTseries 3)\WorkSpace\Users
To Here: C:\ProgramData\Bentley\MicroStation V8i (SELECTseries)\WorkSpace\Users
3. Delete the folder named C:\ProgramData\Bentley\PowerGEOPAK V8i (SELECTseries 3) and all subfolders.
4. Delete the custom icons that are specific to Power GEOPAK and use the generic icons that get added during software installation.

Development Guide Updates

The following Sections/Files have been updated:

- Design Submittal Requirements Chapter 8 – ProjectWise Pre-Bid Processes page has been moved to [Chapter 1 - ProjectWise Pre-Bid Processes](#).
- Design Submittal Requirements Chapter 1 – Introduction has been moved to [Design Submittal Requirements](#).
- Design Submittal Requirements Chapter 4 – Developing 3D Models has been moved to [Chapter 4 - Developing Electronic Data](#).
- Design Submittal Requirements Chapter 6 – 3D Model QA/QC has been moved to [Chapter 6 - Quality Management of Electronic Data](#).

The following Pages/Information have been added:

- Navigation Boxes (Navbox) have been added on the right to the Development Resources shown in the sidebar. The Development Resources currently include the [Design Submittal Requirements](#) and the [Survey Manual](#).

- Note that a 'By Content Type' section is planned for the Design Submittal Requirements Navbox. Since this is intended to assist users navigating the site we are looking for suggestions from the users on potential groupings of content information. Current thoughts on potential Content Types are 3D Model, and Project Preparation and Delivery. Please contact MDOT-RIDSupport@michigan.gov with any suggestions.
- Some sections of Survey Manual [Chapter 4 - Surveys - Types](#) have been updated and more content is expected to be updated as noted on the page.
- Some sections of Survey Manual [Chapter 10 - Deliverables](#) have been updated and more content is expected to be updated as noted on the page.

Workspace File Update Summary

Sheets

File: Sh_Sheet_Borders.cel
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Elements\Cells
 Change: Updated Engineer of Development in title sheet block from Mark Van Port Fleet to Brad Wieferich for all sheet border cells.

File: Project Info Sheet.doc
 Location: ProjectWise: [Project Info Sheet.doc](#)
 Location: Web: http://www.michigan.gov/documents/mdot/MDOT_Project_Info_Sheet_314660_7.doc
 Change: Updated plan sheet order to reflect changes in Road Design Manual.

Geometry

File: Features_CivilClassic_MDOT.ddb
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features
 Change: Updated all horizontal alignments to include a 50 scale option.

File: accudrawFav.xml
 File: accudrawSettings.xml
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Civil AccuDraw Seed Files
 Change: Added folder and user preference seed files to allow for management of Civil AccuDraw default settings via the workspace, in preparation for future development.

File: MDOT_02.pcf
 Location: M:\MDOT_02 Workspace\Projects
 Change: Added configuration variable to point to Civil AccuDraw seed files in workspace, in preparation for future development.

Profile Tools

File: MDOT_GrndPro.mvba
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Apps\VBA
 Change: Resolved bug in the "Ground Point Profile" tool involving the presence of multiple station equations.

File: GeopakComExeLoadSS3.bas replaced by GeopakComExeLoadPowerGEOPAK.bas
 File: GeopakComExeLoadSS4.bas replaced by GeopakComExeLoadCivilSuite.bas
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Apps\Macros

Change: Updated macros to set visual basic version (via geopakcom.exe) for all combinations of SS3, SS4, Power GEOPAK, and Civil Suite, in preparation for the future transition from SS3 to SS4.

File: MDOT_02.pcf

Location: M:\MDOT_02 Workspace\Projects

Change: Updated IF statement logic for macros to set visual basic version (via geopakcom.exe) for all combinations of SS3, SS4, Power GEOPAK, and Civil Suite, in preparation for the future transition from SS3 to SS4.

Roadway Design

File: MDOTMaintenanceCrossOver.dgnlib

Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Civil Cells\SS3

Change: Revised existing Civil Cell.

File: MDOT_Dr_atEOP_NoTangent.dgnlib

File: MDOT_Dr_CnG_wDetM_NoTangent.dgnlib

Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Civil Cells\SS3

Change: Added new Civil Cells.

File: MDOT_CorMod_Template_Library_Master.itl

Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Roadway Templates

Change: Added new linear templates to Template Library for use with new Civil Cells.

File: Old: MDOT Superelevation Worksheet 1.8Version.xltx

File: New: MDOT Superelevation Worksheet 1.9Version.xltx

Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Superelevation

Change: Updated Superelevation Worksheet to address situations involving station equations and regions, where the station equation may not fall on the PT of a curve.

File: Features_General_MDOT_SS3.dgnlib

Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features

Changes: The following changes were made to levels, element templates, & features:

- Reassigned the CLIP survey feature from existing level "Terrain_Ex_Source_Boundary_GS~" to new level "Terrain_Ex_Clip_Boundary_GS~", in order to prevent the CLIP boundary and terrain boundary from using the same level.
- Added levels, element templates, & features for P_Corridor_CC_Bndry_ClipLine~ and P_Corridor_CCRef_Pt~, for Civil Cell development.
- Added element templates & features for driveway curb & gutter (Detail L, Detail M, Radii), Shoulder Gutter, Spillway, Concrete Pavement Repair, Concrete Steps, and Sidewalk Landing & Ramp.
- Changed the level override colors for P_Trvl_CrownJoint and P_Trvl_Joint_Longitudinal from black to gray, so they are visible in the 3D model when level overrides are turned on.
- Set template related Corridor levels as non-plotting in Level Manager and added the non-plotting symbol (~) for use with level filters. Also added the non-plotting symbol (~) to element template names, which are linked to Project Explorer > Civil Standards > Project Settings.

File: MDOT_02.pcf

Location: M:\MDOT_02 Workspace\Projects

Change: Added configuration variable to display user created civil cells (saved by user to dgn folder) in the civil cell selection menu.

File: Sheet_View_Filters.dgnlib
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Level Filters
Change: Added a new level filter called "3D Line String – 0 Top of Barr Or Wall" to display 3D line strings for concrete barriers and retaining walls. Also added surfacing construction limit levels to the "3D Line Strings – 1 Surface" level filter.

Drainage

File: MDOT_Drain_Pref_Prof.ppf
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Classic\Drainage
Change: Updated utility crossing symbology.

File: MDOT_Drain_Pref_Prof_Ex.ppf
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Classic\Drainage
Change: Added a GEOPAK Drainage profile preference file for existing storm sewer systems.

File: MDOT_DrainTab.mvba
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Apps\VBA\Drainage Reports
Change: Correction to drainage area calculation method.

SUE / SUDA / Utilities

File: Features_General_MDOT_SS3.dgnlib
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features
Changes: The following changes have been made to levels:

- Update level display priority for structure covers & hand hole covers, so they display above pavement removal patterns.
- Removed transparency from the Util_NoID_Ex_Struc_Bottom level.
- Set Drain_SUDA_Node levels as non-plotting in the Level Manager.
- Renamed SUDA level from "Drain_SUDA_Node_BoreHole~" to "Drain_SUDA_Node_TestHole~".

File: Drain_3D_MDOT.cel
File: Util_3D_MDOT.cel
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\SUDA
Change: Ongoing SUE development.

File: Dr_Drain_2D.cel
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Elements\Cells
Change: Added headwalls and arch end section cells.

File: Ut_Uilities.cel
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Elements\Cells
Change: Added large diameter sanitary manholes.

Structures

File: MDOT_CorMod_Template_Library_Master.itl
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Roadway Templates
Change: Added folder and linear template to template library for 3D modeling of bridge foundation excavation limits.

File: Bridgenotes.dat
File: BridgeNotes_GCategories.dat
File: BridgeNotes_Graphic.dat
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Apps\VBA\data
Change: Added cell for Note 8.09.07A.

File: Features_General_MDOT_SS3.dgnlib
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features
Change: Updates to levels in order to improve clarity, based in part on user feedback.

File: Structures.dgnlib
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Level Filters
Change: Updates to level filters to reflect level changes.

File: St_Symbols
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Elements\Cells
Change: Changed section callout cells to include annotation scale.

Survey

Survey Deliverables For MDOT_01 Plan Production

If you have received survey deliverables in MDOT_02, yet desire to perform plan production work in MDOT_01, a level remap file (CSV) and supporting Help document are now available for use in converting the S-XXXXXX_Survey_2D_20YY-MM-DD.dgn file from MDOT_02 to MDOT_01. Should you need any additional assistance, please contact MDOT-Survey_Support@Michigan.gov.

File: Survey_Remap_MDOT_02_To_MDOT_01.csv
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Level Remap
Change: Added level remap file to revert from the 02 to 01 workspace.

File: Survey_Remap_MDOT_02_To_MDOT_01.docx
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Level Remap
Change: Added level remap help document to revert from the 02 to 01 workspace.

File: Features_General_MDOT_SS3.dgnlib
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features
Changes: Reassigned the CLIP survey feature from existing level "Terrain_Ex_Source_Boundary_GS~" to new level "Terrain_Ex_Clip_Boundary_GS~", in order to prevent the CLIP boundary and terrain boundary from using the same level.

File: 051115_MDOT_02.mdb
File: Features_Survey_MDOT.mdb
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Survey
Change: Renamed file from "051115_MDOT_02.mdb" to "Features_Survey_MDOT.mdb".

File: Features_Survey_MDOT.mdb
File: Features_Survey_MDOT.smd
File: Features_Survey_MDOT.xml
Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\Survey
Change: Changes to survey features include the following:

- Reassigned the CLIP survey feature from existing level "Terrain_Ex_Source_Boundary_GS~" to new level "Terrain_Ex_Clip_Boundary_GS~", in order to prevent the CLIP boundary and terrain boundary from using the same level.
- Removed the CLIPP and CLIPS feature codes.

File: Features_General_MDOT_SS3.dgnlib
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\General\Features
 Change: Relinked survey features (Features_Survey_MDOT.xml).

Civil Report Browser

File: All files provided by Bentley.
 Location: M:\MDOT_02 Workspace\Projects\MDOT_02\Civil Standards\ReportBrowser
 Change: Added the Bentley Civil Report Browser folder structure & files to the workspace, in order to allow for addition / modification / removal of reports as needed.

File: MDOT_02.pcf
 Location: M:\MDOT_02 Workspace\Projects
 Change: Added configuration variable to redirect the Civil Report Browser from C:\ProgramData\Bentley\Civil\ReportBrowser\8.11.9\en to the workspace.

MDOT Technical Support

Technical support is available through the following email addresses, which can also be found on the [Development Guide Help](#) page:

Design Surveys:	MDOT-Survey_Support@michigan.gov
Bridge Design:	MDOT-BridgeDesignSupport@michigan.gov
Drawing Tools, Printing, Workspace & Software Installation:	MDOT-CADDSupport@michigan.gov
Geometry Tools and Corridor Modeling:	MDOT-PowerGEOPAKSupport@michigan.gov
Geopak Drainage & Subsurface Utilities:	MDOT-Drainage-Utility@michigan.gov
Reference Information Documents (RID):	MDOT-RIDSupport@michigan.gov
ProjectWise - General (MDOT staff only):	MDOT-ProjectWise@michigan.gov
ProjectWise - Letting:	MDOT-ePROPOSAL@michihgan.gov
ProjectWise - Consultant:	MDOT-ProjectWiseConsultant@michigan.gov
ProjectWise - Construction:	MDOT-ProjectWiseCONST@michigan.gov