



PLAN & PROFILE SHEETS – MICROSTATION (LEGACY)

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Overview

Development of a Utility Plan PLP sheet in the Microstation legacy workspace.

Process Provenance

- Date of development: N/A
- Revision date: N/A
- Application/Tool(s): *MicroStation V8i SS10*
- Version(s): N/A
- Environment(s): *GEOPAK (Legacy) Workspace*
- Author: [MDT EngOps Workflow Steering Committee](#)

Statement of Need










This process develops a sheet that is a part of the Utility plans which play a vital role in moving MDT Highway projects toward completion.




Process Description and Examples

Section I. Plan & Profile Sheet Creation


Procedure























1. Download the file from the RD workgroup in DMS that contains the plan and profile, usually named 1234000RDPLP001. Copy this file to the directory c:\dgn\ref for referencing.
2. Open RD detail sheet, save it as UT detail sheet (ex. 1234000**UTPLP001**.DGN)
 - Place a fence around all elements in the file, delete the active elements, and then compress the file.
3. Attach UTILITYV8_0.TBL (color table) and UTILITYV8_0E.CEL (cell library) from <ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/UTSTD/>.
4. In 'Active file' 'View Attributes', turn on Level Overrides.
5. In 'Reference' 'Settings' 'Level Display', choose MTSTD:PLANE.REF, set filter to UTPLP.
6. In 'Reference' 'Settings' 'Level Manager', choose MTSTD:PLANE.REF, set all style and weight attributes off, color attributes to 0 (white) except as follows:
 - Levels 10111, 10113, 10202, 10204, 10304, & 10306 to color 40 (gray).
 - Levels 10112, 10114, 10203, 10205, 10305, & 10307 to color 32 (light gray).

Name	Number	Color
S_BOT_RD_ProfileGrid_Hoz_10ft	10111	 40
S_BOT_RD_ProfileGrid_Hoz_2ft	10112	 32
S_BOT_RD_ProfileGrid_Vert_100ft	10113	 40
S_BOT_RD_ProfileGrid_Vert_50ft	10114	 32
S_MID_RD_ProfileGrid_Hoz_10ft	10202	 40
S_MID_RD_ProfileGrid_Hoz_2ft	10203	 32
S_MID_RD_ProfileGrid_Vert_100ft	10204	 40
S_MID_RD_ProfileGrid_Vert_50ft	10205	 32
S_TOP_RD_ProfileGrid_Hoz_10ft	10304	 40

Name	Number	Color
S_TOP_RD_ProfileGrid_Hoz_2ft	10305	 32
S_TOP_RD_ProfileGrid_Vert_100ft	10306	 40
S_TOP_RD_ProfileGrid_Vert_50ft	10307	 32







7. Attach RD Plan Sheet as a reference with RDPLP-1 as the logical name.
 - Clip boundary around RDPLP-1 to display the plan and profile information.
8. Repeat as necessary for remaining plan and profile sheets in the file (RDPLP-2, RDPLP-3).
9. In 'Reference' 'Settings' 'Level Manager', choose RDPLP references, set all style and weight attributes off, color attributes to 0 (white).
10. In 'Reference' 'Settings' 'Display', set all horizontal design references (RDMAP-H#) to display construction related items (Centerline, construction limits, pipes, etc.).
 - In 'Reference' 'Settings' 'Level Manager', set all style and weight attributes off, color attributes to 0 (white) except:
 - Wetland delineation levels to color 40 (gray).
11. In 'Reference' 'Settings' 'Display', choose all vertical design references (RDMAP-V#) and turn off soil boring information.
 - In 'Reference' 'Settings' 'Level Manager', set all style and weight attributes off, color attributes to 0 (white) except:
 - Dig out hatching levels to color 40 (gray).
12. In 'Reference' 'Settings' 'Level Manager', choose any Environmental (Wetland) references and set all style and weight attributes off, color attributes to 40 (gray).
13. In 'Reference' 'Settings' 'Level Manager', select the survey map references (PHMAP, DIMAP) and set all style and weight attributes off, color attributes as follows:

**LEVEL DISPLAY **		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
1100	E_Barrier_Fence_Cattleguard	 80

**LEVEL DISPLAY **		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
1103	E_Barrier_Fence_Fence	 80
1106	E_Barrier_Fence_Gate	 80
1112	E_Barrier_Guardrail	 80
1118	E_Drainage_Culvert_CulvertInlet	 80
1123	E_Drainage_Irrigation_IrrigationFeature	 80
1147	E_Drainage_Water_Headgate	 80
1131	E_Drainage_Water_InletRound	 80
1209	E_Natural_Vegetation_Shrub	 80
1211	E_Natural_Vegetation_Tree	 80
1222	E_Natural_Water_EdgeofWater	 80
1247	E_Natural_Water_FlowLineWithFlow	 80
1233	E_Natural_Water_Thalweg	 80
1236	E_Natural_Water_WaterEdge	 80
1239	E_Natural_Water_WetlandBoundary	 40
1260	E_Road_RR_Road_Concrete	 80
1266	E_Road_RR_Road_EdgeofRoadGravel	 80
1269	E_Road_RR_Road_EdgeofRoadPavement	 80
1275	E_Road_RR_Road_Mailbox	 80
1296	E_Road_RR_Signs_Sign2Face	 80
1302	E_Road_RR_Signs_SignMultiPost	 80
1305	E_Road_RR_Signs_SignSingle_Post	 80
1322	E_Structure_Misc_Building	 80

14. Attach RO Map File (ROMAP-#) if not already attached.

- In 'Reference' 'Settings' 'Level Manager', select the RO Map references and set all style and weight attributes off, color attributes as follows:

LEVEL DISPLAY		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
905	E_RW_EX_RW_And_Ease_Line	 80
918	E_RW_Ownership_Dots	 80
920	E_RW_Property_Line	 80
926	E_RW_Section_Corners	 80
927	E_RW_SectionLine_Exterior	 80
947	E_RW_SectionLine_Interior	 80



























15. Attach RO Plan Sheet file (ROPLN-#) if not already attached.













- In 'Reference' 'Settings' 'Level Manager', select the RO Plan references and set all style and weight attributes off, color attributes as follows:

LEVEL DISPLAY		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
901	E_RW_AliquotPart_And_Lot_Call	<input type="checkbox"/> 0
903	E_RW_CountyRd_CityStreet_Name	<input type="checkbox"/> 0
904	E_RW_EX_RW_And_Ease_Dimension	<input type="checkbox"/> 0
906	E_RW_EX_RW_Call_Leader	<input type="checkbox"/> 0
942	E_RW_WaterwayLabel	<input type="checkbox"/> 0
3001	P_RW_AcquisitionCallout	<input type="checkbox"/> 0
3011	P_RW_ConstPmt_Callout_Dim	<input type="checkbox"/> 0
3012	P_RW_ConstPmt_Line	<input type="checkbox"/> 0
3027	P_RW_New_RW_And_Ease_Callout_And_Dim	<input type="checkbox"/> 0
3047	P_RW_New_RW_And_Ease_Line	<input type="checkbox"/> 0
3033	P_RW_Parcel_Number	<input type="checkbox"/> 0

16. Attach UT map file (UTMAP-#) or (UMSUE#) if not already attached.

- In 'Reference' 'Settings' 'Level Manager', select the UT references and set all style and weight attributes off, color attributes as follows:

LEVEL DISPLAY		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
1417	E_Utility_Communication_CableTVOverhead	 5
1420	E_Utility_Communication_CableTVUnderground	 5
1423	E_Utility_Communication_FiberOpticCableOverhead	 6
1426	E_Utility_Communication_FiberOpticCableUnderground	 6
1429	E_Utility_Communication_TelegraphPole	 6
1431	E_Utility_Communication_TelephoneBooth	 6
1433	E_Utility_Communication_TelephoneOverhead	 6
1436	E_Utility_Communication_TelephonePedestal	 6
1438	E_Utility_Communication_TelephonePole	 6
1440	E_Utility_Communication_TelephoneUnderground	 6
1443	E_Utility_Drainage_SanitarySewer	 2
1449	E_Utility_Gas_GasMeter	 56
1451	E_Utility_Gas_GasUnderground	 56
1454	E_Utility_Gas_GasValve	 56
1456	E_Utility_Manhole_ManholeElectric	 3
1458	E_Utility_Manhole_ManholeMisc	 0
1460	E_Utility_Manhole_ManholeSanitarySewer	 2
1464	E_Utility_Manhole_ManholeTelephone	 6
1466	E_Utility_Misc_GuyPole	 3
1468	E_Utility_Misc_GuyWireAnchor	 3
1474	E_Utility_Misc_PedestalBase	 0
1477	E_Utility_Misc_Tower	 0
1479	E_Utility_Misc_UtilityXingOverhead	 0
1481	E_Utility_Misc_UtilityXingUnderground	 0
1483	E_Utility_Misc_ValveMisc	 0
1485	E_Utility_Power_LightPole	 3

LEVEL DISPLAY		LEVEL
NOT A COMPLETE LIST, FOR EXAMPLE ONLY		MANAGER
NUMBER	NAME	COLOR
1487	E_Utility_Power_PowerOverhead	 3
1490	E_Utility_Power_PowerPedestal	 3
1492	E_Utility_Power_PowerPole	 3
1494	E_Utility_Power_PowerUnderground	 3
1500	E_Utility_Power_TransmissionTower	 3
1507	E_Utility_Water_FireHydrant	 1
1509	E_Utility_Water_WaterHydrant	 1
1511	E_Utility_Water_WaterMeter	 1
1513	E_Utility_Water_WaterUnderground	 1
1516	E_Utility_Water_WaterValve	 1
1518	E_Utility_Water_Well	 1
1558	E_Utility_Misc_Pole	 0

17. In 'Reference' 'Settings' 'Update Sequence', change the update sequence similar to the following:

Update Sequence			
Slot	File Name	Model	Logical Name
5	MTSTD:PLANE.REF	Default	SHT
2	MTHY4890:4890HYMAPF02.DGN	Default	HYMAP-1
6	MTHY4890:4890HYMAPF02.DGN	Default	HYMAP-2
10	MTHY4890:4890HYMAPF02.DGN	Default	HYMAP-3
1	MTPH4890:4890PHMAPF01.DGN	Default	PHMAP-1
9	MTPH4890:4890PHMAPF01.DGN	Default	PHMAP-2
17	MTPH4890:4890PHMAPF01.DGN	Default	PHMAP-3
13	MTDI4890:4890DIMAPF01.DGN	Default	DIMAP-1
14	MTDI4890:4890DIMAPF01.DGN	Default	DIMAP-2
15	MTDI4890:4890DIMAPF01.DGN	Default	DIMAP-3
3	MTRO4890:4890ROMAP001.DGN	Default	ROMAP-1
7	MTRO4890:4890ROMAP001.DGN	Default	ROMAP-2
11	MTRO4890:4890ROMAP001.DGN	Default	ROMAP-3
12	MTRD4890:4890RDMAPWIL.DGN	Default	WILLOW
8	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP-2
16	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP-4
24	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP-6
4	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP H1
18	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP H2
20	MTRD4890:4890RDMAPF01.DGN	Default	RDMAP H3
19	MTRD:4890RDPLP002.DGN	Default	RDPLP-1
21	MTRD:4890RDPLP002.DGN	Default	RDPLP-2
22	MTRD:4890RDPLP002.DGN	Default	RDPLP-3
	4890UTPLP002.DGN	Default	Active Design File

18. Attach cell "STDSHTDF" from cell library. It is inserted at XY=50000,50000.

- Fill in the data for the project information. This cell contains the county name, project name, project UPN, project number, scale factor and sheet number data fields for the bottom of the pages.

19. Review & correct all plan and profile sheets for errors and/or omissions, readability, etc.

20. Identify and add utility callouts.