

Photogrammetry File Naming Standards

11/6/2020

(Photogrammetry Unit Deliverable Files)

PLANIMETRIC MAPPING FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Shell Topo Mapping	tip#_ph_st_date.dgn	r1234ab_ph_st_170601.dgn	3-D Design File*
Topo Mapping	tip#_ph_t_date.dgn	r1234ab_ph_t_170601.dgn	3-D Design File*
Shell Plan Sheet Mapping	tip#_ph_sps_date.dgn	r1234ab_ph_sps_170601.dgn	3-D Design File*
Preliminary Plan Sheet Mapping	tip#_ph_pps_date.dgn	r1234ab_ph_pps_170601.dgn	3-D Design File*
Plan Sheet Mapping	tip#_ps_date.dgn	r1234ab_ps_170601.dgn	3-D Design File*
Final Survey Mapping	tip#_ncdot_fs_date.dgn	r1234ab_ncdot_fs_170601.dgn	3-D Design File*

*Mapping is compiled in a 3-D design file, but the final delivered file is a 2-D design file

DIGITAL TERRAIN MAPPING FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
DEM (Orthophoto Only)	tip#_ph_op_dem_date.dgn*	r3456ab_ph_op_dem_170601.dgn	3-D Design File
DTP (no field data)	tip#_ph_PT_dtp_date.dgn*	r1234ab_ph_sps_dtp_170601.dgn	3-D Design File
TNP (no field data)	tip#_ph_PT_tnp_date.dgn*	r1234ab_ph_sps_tnp_170601.tin	Binary File
DTM (photo & field)	tip#_PT_dtm_date.dgn*	r1234ab_ps_dtm_170601.dgn	3-D Design File
TIN (photo & field)	tip#_ph_PT_tin_date.dgn*	r1234ab_ps_tnp_170601.tin	Binary File

**"PT" = Product Type (The Product Type shall match the planimetric mapping product abbreviation) i.e. - PT is changed to sps for a shell plan sheet product)

MISCELLANEOUS MAPPING PRODUCTS FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Drainage File (Orthophoto Only)	tip#_ph_drm_date.dgn	r3456ab_ph_drm_170601.dgn	2-D Design File
Property (County GIS)	tip#_COUNTY_prop_date.dgn**	r1234ab_wake_prop_170601.dgn	2-D Design File
Property (L&S)	tip#_ls_prlp_date.dgn	r1234ab_ls_prlp_170601.dgn	2-D Design File
Low Confidence Area	tip#_lca_date.dgn	r1234ab_lca_170601.dgn	3-D Design File

**"COUNTY" = Name of County where NC Onemap obtained property data from
**The date in the file name should be the date GIS provided the county file

DIGITAL MOSAIC IMAGERY FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Digital Mosaic RGB (SID)	tip#_mission#_m_DOP.sid	r2345ab_m1212_m_170325.sid	Raster File
SID World File (SDW)	tip#_mission#_m_DOP.sdw	r2345ab_m1212_m_170325.sdw	ASCII File
Digital Mosaic CIR (SID)	tip#_mission#_m_cir_DOP.sid	r2345ab_m1212_m_cir_170325.sid	Raster File
SID World File (SDW)	tip#_mission#_m_cir_DOP.sdw	r2345ab_m1212_m_cir_170325.sdw	Raster File
Mosaic Tile Layout	tip#_mission#_m_lay_date.dgn	r2345ab_m1212_m_lay_170601.dgn	2-D Design File
Seamline File	tip#_mission#_seamline_date.dgn	r2345ab_m1212_seamline_170601.dgn	2-D Design File
Corrective Action File	tip#_mission#_ca_date.dgn	r2345ab_m1212_ca_170601.dgn	2-D Design File
Digital Mosaic Tiles RGB (SID)	tip#_mission#_m_tile#_DOP.sid	r2345ab_m1212_m_680202_170325.sid	Raster File
SID World File (SDW) [Tiles]	tip#_mission#_m_tile#_DOP.sdw	r2345ab_m1212_m_680202_170325.sdw	ASCII File
Digital Mosaic Tiles CIR (SID)	tip#_mission#_m_tile#_cir_DOP.sid	r2345ab_m1212_m_680202_cir_170325.sid	Raster File
SID World File (SDW) [Tiles]	tip#_mission#_m_tile#_cir_DOP.sdw	r2345ab_m1212_m_680202_cir_170325.sdw	ASCII File
Orthorectified RGB Individual Exposure (TIFF)	sav_region_mission#_strip#_exp#_dop.tif	sav_bogue_m8643_001_0002_200516.tif	Raster File
Orthorectified RGB Individual Exposure World file	sav_region_mission#_strip#_exp#_dop.tfw	sav_bogue_m8643_001_0002_200516.tfw	ASCII File
Orthorectified CIR Individual Exposure (TIFF)	sav_region_mission#_strip#_exp#_cir_dop.tif	sav_bogue_m8643_001_0001_cir_200516.tif	Raster File
Orthorectified CIR Individual Exposure World file	sav_region_mission#_strip#_exp#_cir_dop.tfw	sav_bogue_m8643_001_0001_cir_200516.tfw	ASCII File

ORTHOPHOTOGRAPHY IMAGERY FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Orthophoto RGB (SID)	tip#_mission#_op_DOP.sid	r3456ab_m1112_op_051120.sid	Raster File
SID World File (SDW)	tip#_mission#_op_DOP.sdw	r3456ab_m1112_op_051120.sdw	ASCII File
Orthophoto CIR (SID)	tip#_mission#_op_cir_DOP.sid	r2356ab_m1212_m_cir_051120.sid	Raster File
SID World File (SDW)	tip#_mission#_op_cir_DOP.sdw	r3456ab_m1112_op_cir_051120.sdw	ASCII File
Orthophoto Tile Layout	tip#_mission#_op_lay_date.dgn	r3456ab_m1112_op_lay_170601.dgn	2-D Design File
Seamline File	tip#_mission#_seamline_date.dgn	r3456ab_m1112_seamline_170601.dgn	2-D Design File
Corrective Action File	tip#_mission#_ca_date.dgn	r3456ab_m1112_ca_170601.dgn	2-D Design File
Orthophoto RGB Tiles (SID)	tip#_mission#_op_tile#_DOP.sid	r3456ab_m1112_op_680202_051120.sid	Raster File
SID World File (SDW) [Tiles]	tip#_mission#_op_tile#_DOP.sdw	r3456ab_m1112_op_680202_051120.sdw	ASCII File
Orthophoto CIR Tiles (SID)	tip#_mission#_op_tile#_cir_DOP.sid	r3456ab_m1112_op_680202_cir_051120.sid	Raster File
SID World File (SDW) [Tiles]	tip#_mission#_op_tile#_cir_DOP.sdw	r3456ab_m1112_op_680202_cir_051120.sdw	ASCII File

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11/6/2020

UNMANNED AIRCRAFT SYSTEM (UAS) MAPPING FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Classified Point Cloud	tip#_mission# <i>PIT</i> cptclد_date.las	r2530b_ucs748gsp_gsdev_cptclد_200731.las	LAS
DEM file	tip#_mission# <i>PIT PTS</i> ftdem_date.dgn	r2530b_ucs748gsp_gsdev_2p5ftdem_200731.dgn	3-D Design File
TIN	tip#_mission# <i>PIT PTS</i> ftdem_date.tin	r2530b_ucs748gsp_gsdev_2p5ftdem_200731.tin	Binary File
Digital Mosaic (SID)	tip#_mission# <i>PIT</i> _m_DOP.sid	r2530b_ucs748gsp_gsdev_m_200714.sid	Raster File
SID World File (SDW)	tip#_mission# <i>PIT</i> _m_DOP.sdw	r2530b_ucs748gsp_gsdev_m_200714.sdw	ASCII File

PIT- Name of the borrow pit

PTS- DEM point spacing in feet (Example: "2p5" means "2.5")

NOTE: If the UAS project is not a borrow pit, the pit name would be omitted from the file names.

AIRBORNE SURVEY REPORT FILES (.PDF)

<u>Product</u>	<u>Name</u>	<u>Example</u>
Aerotriangulation Report	tip#_mission#_AT_report_date.pdf	r1234ab_m3131_AT_report_170501.pdf
Aerial Surveys Report	tip#_mission#_ph_AS_ <i>PT</i> _report_date.pdf*	r1234ab_m3131_ph_AS_sps_report_170601.pdf***

PT = Product Type (The Product Type shall match the planimetric mapping product abbreviation) i.e. - *PT* is changed to *sps* for a shell plan sheet product)

***see "AERIAL SURVEYS REPORT" for more examples

UNMANNED AIRCRAFT SYSTEM (UAS) AIRBORNE SURVEY REPORT FILES (.PDF)

<u>Product</u>	<u>Name</u>	<u>Example</u>
Image Alignment Report	tip#_mission# <i>PIT</i> _IA_report_date.pdf	r2530b_ucs748gsp_gsdev_IA_report_200727.pdf
Aerial Surveys Report	tip#_mission# <i>PIT</i> _AS_dem_report_date.pdf	r2530b_ucs748gsp_gsdev_AS_dem_report_200731.pdf

PIT- Name of the borrow pit

NOTE: If the UAS project is not a borrow pit, the pit name would be omitted from the file names.

AERIAL TRIANGULATION SUPPORT FILES (EXCEL or WORD)

<u>Product</u>	<u>Name</u>	<u>Example</u>
AT Check Point Statistics	tip#_mission#_ph_AT_checkpoints_date.xlsx	r1234ab_m3131_ph_AT_checkpoints_170501.xlsx
AT Control Point Statistics	tip#_mission#_ph_AT_controlpoints_date.xlsx	r1234ab_m3131_ph_AT_controlpoints_170501.xlsx
AT Data for Points	tip#_mission#_ph_AT_datapoints_date.xlsx	r1234ab_m3131_ph_AT_datapoints_170501.xlsx
AT Exterior Orientation Data	tip#_mission#_ph_AT_EO_date.xlsx	r1234ab_m3131_ph_AT_EO_170501.xlsx
AT Standard Deviation Statistics	tip#_mission#_ph_AT_SDS_date.xlsx	r1234ab_m3131_ph_AT_SDS_170501.xlsx
Photogrammetric AT Results	tip#_mission#_ph_AT_results_date.docx	r1234ab_m3131_ph_AT_results_170501.docx

UNMANNED AIRCRAFT SYSTEM (UAS) IMAGE ALIGNMENT SUPPORT FILE (.TXT)

<u>Product</u>	<u>Name</u>	<u>Example</u>
IA Exterior Orientation File	tip#_mission# <i>PIT</i> _IA_EO_localized adjusted_date.txt	r2530b_ucs748gsp_gsdev_IA_EO_localized_adjusted_200727.txt

PIT- Name of the borrow pit

NOTE: If the UAS project is not a borrow pit, the pit name would be omitted from the file names

AERIAL SURVEYS REPORT (.PDF) (File Naming Examples)

<u>Product Type</u>	<u>Abbrv.</u>	<u>Example</u>
Shell Topo Mapping	st	r1234ab_m3131_ph_AS_st_report_170601.pdf
Topo Mapping	t	r1234ab_m3131_ph_AS_t_report_170601.pdf
Shell Plan Sheet Mapping	sps	r1234ab_m3131_ph_AS_sps_report_170601.pdf
Preliminary Plan Sheet Mapping	pps	r1234ab_m3131_ph_AS_pps_report_170601.pdf
Plan Sheet Mapping	ps	r1234ab_m3131_ph_AS_ps_report_170601.pdf
Final Survey Mapping	fs	r1234ab_m3131_ph_AS_fs_report_170601.pdf
Helicopter Pavement Profile	hpvt	r1234ab_m3131_ph_AS_hpvt_report_170601.pdf

PRODUCT TYPE (PT) ABBREVIATIONS

<u>Abbry.</u>	<u>Product Type Description</u>
m	Digital Mosaics
op	Orthophotography
st	Shell Topographic mapping
t	Topographic mapping
u	Unmanned Aircraft System
pps	Preliminary Plan Sheet mapping
sps	Shell Plan Sheet mapping
ps	Plan Sheet mapping
fs	Final Survey mapping
dem	Digital Elevation Model (orthophoto only)
dtp	Digital Terrain Model (no field data)
dtm	Digital Terrain Model (photo & field)
pdtm	Preliminary DTM for Plan Sheet mapping
ctr	Contours file
drn	Drainage file
pvmnt	High accuracy pavement profiles
prop	County GIS property (owners names only)
pprop	Preliminary County GIS property (owners names not included)
lay	Tile layout for mosaics or orthophotos
LiDAR	L ight D etection A nd R anging
10ft	Gridded LiDAR (10 foot spacing between each point)
20ft	Gridded LiDAR (20 foot spacing between each point)
be	Bare Earth LiDAR
QL2	Quality Level 2 (Points Density of 2 points/meter)
ph	Photogrammetry Unit
ncdot	North Carolina Department of Transportation
ncfmp	North Carolina Floodplain Mapping Program
GIS	Geographic Information Systems

Photogrammetry File Naming Standards

11/6/2020

(Photogrammetry Unit's Deliverable Files to Consultants)

DIGITAL AERIAL IMAGERY

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
DMC 36 Bit Color RGB Imagery	mission#_Strip#_exposure#_rgb.tif	m7242_001~0005_rgb.tif	TIFF File
DMC 36 Bit Color Inferred Imagery	mission#_Strip#_exposure#_cir.tif	m7242_001~0005_cir.tif	TIFF File
Film 8 Bit Black & White Imagery	mission#_camera counter#.tif	m6256_3467.tif	TIFF File
Preliminary Georeferenced Index Imagery	tip#_mission#_im.sid	r2582_m7200_im.sid	MrSID File

REFERENCE FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Project Limits File	tip#_limits.dgn	r2111a_limits.dgn	2-D Design File
Project Limits File (draped)	tip#_limits_draped.dgn	r2111a_limits_draped.dgn	3-D Design File
Model Layout File	tip#_mission#_mod_DOP.dgn	r2111a_m6065_mod_170325.dgn	2-D Design File

GNSS-IMU CONTROL DATA FILES (.txt and .xls)

<u>Product</u>	<u>Name</u>	<u>Example</u>
GNSS-IMU EO Grid Text	tip#_mission#_adjusted_GPS-IMU_EO_grid.txt	r2111a_m6065_adjusted_GPS-IMU_EO_grid.txt
GNSS -IMU EO Grid Excel	tip#_mission#_adjusted_GPS-IMU_EO_grid.xls	r2111a_m6065_adjusted_GPS-IMU_EO_grid.xls
GNSS -IMU EO Local Text	tip#_mission#_adjusted_GPS-IMU_EO_local.txt	r2111a_m6065_adjusted_GPS-IMU_EO_local.txt
GNSS -IMU EO Local Excel	tip#_mission#_adjusted_GPS-IMU_EO_local.xls	r2111a_m6065_adjusted_GPS-IMU_EO_local.xls

GROUND SURVEY CONTROL DATA FILE

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
L&S Ground Control Data	tip#_ls_pan_date.txt	r2111a_ls_pan_170601.txt	TEXT file
L&S Ground Control Data w/o Localize Pts	tip#_ls_pan_woLP_date.txt	r2111a_ls_pan_woLP_170601.txt	TEXT file
L&S Ground Control Data w/Check Points	tip#_ls_pan_wCP_date.txt	r2111a_ls_pan_wCP_170601.txt	TEXT file
L&S Grid Ground Control Data	tip#_ls_pan_grid_date.txt	r2111a_ls_pan_grid_170601.txt	TEXT file
Photo Grid Ground Control Data	tip#_ph_pan_grid_date.txt	r2111a_ph_pan_grid_170601.txt	TEXT file

LiDAR DATA

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Bare Earth QL2 LiDAR Local	tip#_QL2_lidar_BE_local.dgn	r2111a_QL2_lidar_BE_local.dgn	3-D Design File
Decimated QL2 LiDAR Local	tip#_QL2_lidar_0.5ft_dec_local.dgn	r2111a_QL2_lidar_0.5ft_dec_local.dgn	3-D Design File
10' Gridded DEM QL2 LiDAR Local	tip#_QL2_lidar_10ft_dem_local.dgn	r2111a_QL2_lidar_10ft_dem_local.dgn	3-D Design File
10' Gridded DEM QL2 LiDAR Local	tip#_QL2_lidar_10ft_dem_local.asc	r2111a_QL2_lidar_10ft_dem_local.asc	ASCII File
20' Gridded DEM QL2 LiDAR Grid	tip#_QL2_lidar_20ft_dem_grid.dgn	r2111a_QL2_lidar_20ft_dem_grid.dgn	3-D Design File
20' Gridded DEM QL2 LiDAR Grid	tip#_QL2_lidar_20ft_dem_grid.asc	r2111a_QL2_lidar_20ft_dem_grid.asc	ASCII File
20' Gridded DEM NCFMP LiDAR Grid	tip#_ncfpm_lidar_20ft_dem_grid.dgn	r2111a_ncfpm_lidar_20ft_dem_grid.dgn	3-D Design File
20' Gridded DEM NCFMP LiDAR Grid	tip#_ncfpm_lidar_20ft_dem_grid.asc	r2111a_ncfpm_lidar_20ft_dem_grid.asc	ASCII File

AIRBORNE SURVEY REPORT MAP FILES

<u>Product</u>	<u>Name</u>	<u>Example</u>	<u>File Type</u>
Flight Map File	tip#_flt.dgn	i5873_flt.dgn	2-D Design File
MSAU County Maps	county_microstation_units.dgn	WAKE_MS_ENG.dgn	2-D Design File
Flight and Control Maps*	tip#_mission#_flight & control_map.pdf	u5790 m8149 flight & Control map.pdf	PDF File
Detailed Maps*	tip#_mission#_detailed_map.pdf	u5790 m8149 detailed map.pdf	PDF File

*maps are provided if AT is completed by NCDOT

Photogrammetry File Naming Standards

11/6/2020

AERIAL TRIANGULATION SUPPORT FILES TEMPLATES

Product

AT Check Point Statistics
AT Control Point Statistics
AT Points Statistics
AT E.O. Data
AT Object Statistics
Photogrammetric AT Results
AT Report (Portrait)
AT Report (Landscape)

Name

template_Check Point Stats_version#-date.xlsx
template_Control Point Stats_version#-date.xlsx
template_AT Point Data_version#-date.xlsx
template_ATEO Stats_version#-date.xlsx
template_AT Std Dev Stats_version#-date.xlsx
template_AT Results_version#-date.docx
template_AT Report_version#-date (Portrait).docx
template_AT Report_version#-date (Landscape).docx

Example

Template_Check Point Stats_V2-20170601.xlsx
Template_Control Point Stats_V2-20170601.xlsx
Template_AT Point Data_V2-20170601.xlsx
Template_ATEO Stats_V2-20170601.xlsx
Template_AT Std Dev Stats_V2-20170601.xlsx
Template_AT Results_V2-20170601.docx
Template_AT_report_V2-20170601(Portrait).docx
Template_AT_report_V2-20170601(Landscape).docx

IMAGESTATION AERIAL TRIANGULATION (ISAT) Files

<u>File</u>	<u>Description of the Data</u>
PROJECT File	The PROJECT file contains setup information that is used by the OrthoPro Software to determine the Interior Orientation (IO), the Exterior Orientation (EO) for the orientation process
CAMERA File	The CAMERA file is an ASCII formatted file that contains the camera parameters that are needed or used or processing any photo information
PHOTO File	The PHOTO file is an ASCII formatted file that contains the photo parameters that are needed or used for processing any photo information.
MODEL File	The MODEL file is an ASCII formatted file that contains the results of model-specific processing.
CONTROL File	The CONTROL file is an ASCII formatted file that contains a list of control points needed for processing during orientations.
TRIANG File	The TRIANG file is an ASCII formatted file that contains the result of the triangulation process that is completed by the Stereo squads.
CSF File	The CSF file is a coordinate system definition file that is used to interpret elevation coordinates. This file is located in the " CSF " folder.

AERIAL SURVEY REPORT FILES TEMPLATES

Product

Aerial Surveys Report (Portrait)
Aerial Surveys Report (Landscape)

Name

TIP_Mission_ph_AS_Product Type_report_DOR_TEMPLATE (portrait).docx
TIP_Mission_ph_AS_Product Type_report_DOR_TEMPLATE (landscape).docx

SPECIAL NOTES ABOUT DIGITAL FILES

- All file names shall be lower case letters and saved in Top View.
- All plan sheet mapping (including classified, preliminary, and shell) utilizes plan sheet CADD symbology and specifications.
- All topographic mapping utilizes topo CADD symbology and specifications
- All reference files will retain the naming convention by which they were delivered. In the case where a reference file is modified, the date will be changed appropriately and a ‘p’ at the end of the name prior to the suffix. Example: A Property File from Location & Surveys: **u2005_ls_prl_030620.dgn** will change to: **u2005_ls_prlp_030622.dgn**.
- All files are to be made READ ONLY before being delivered.
- When multiple files are required to deliver a particular product, the product abbreviation will be followed by sequential numbers to accommodate the required number of files (i.e. ps1, ps2, ps3, etc.; dtm1, dtm2, dtm3, etc.; dem1, dem2, dem3, etc.; m1, m2, m3, etc.)
- The date in design file and ASCII file names is to be the date the file is transmitted. The format of the date is year-month-day.
- The DOP of the imagery files (raster data) is to be the date of the photography. The DOP of the georeferencing world file (TFW, JGW) is to be the date of the photography. The format of the date is year-month-day.
- For all Unmanned Aircraft System missions, an “U” will be placed in front of the standard mission ID
- Tile numbers will follow the North Carolina Land Records numbering format and be formatted as six (6) digit numbers (i.e. 656501). For 10,000 foot tiles use “00” to complete the 6 digits.
- All files containing both Photogrammetry and field data will drop the “_ph” from the delivered and archived file name. Example: **r1234ab_ph_ps_030620.dgn** is changed to **r1234ab_ps_030620.dgn**
- All DTP, DTM, TNP, and TIN files will include the product type abbreviation in the delivered and archived file name. Example: **r1234ab_dtm_030620.dgn** is changed to **r1234ab_ps_dtm_030620.dgn**
- All Digital Imagery products will contain both the TIP Number and the Mission Number