Electronic File Standards

This document may be used as a guide for electronic file standards or "attachments" to applications submitted online through Tacoma Permits (ACA).

ATTACHMENTS: PDF FORMATTING REQUIREMENTS

Portable Document Format (PDF) is the industry standard for electronic plans. The City of Tacoma only accepts PDF files for plan review. PDF files must be properly formatted as described below. Please read the following instructions carefully. Improperly formatted plans can delay the plan review process for your project.

Layers: No multiple layers. Layers must be merged or flattened.
Format: Vector preferred
Resolution: 300 pixels per inch (PPI)
Color Depth: Monochrome (1-bit)
File Size: 1 megabyte (MB) avg. per sheet. 50 MB total
**Grouping:** Multiple-sheet PDF (single file with multiple sheets)

- **All documents are required to be flattened and full-size, one-to-one format.**
- **Drawings must be submitted in black and white pdf documents, separated by discipline (e.g. architectural, structural, etc.). Drawings must be scaled and oriented correctly and must not exceed 50 MB. Scanned plans must be legible and to scale in order to be reviewed.**
- **Files must be unlocked or unprotected so that corrections may be made by reviewers.**
- **Each plan sheet must be bookmarked to clearly identify the content of the page.**
  Example: Page A1.0 Architectural Site plan
- All reports must be rotated so that the pages of the reports are upright.
- Figures within documents shall be a maximum size of 11" x 17", unless part of a separate appendix.
- The completed submittal checklists and energy forms shall be submitted in PDF format separate from the drawing files.
- Zip files are not accepted.
- **Reports and other documents must be submitted as a separate pdf for each document type (e.g. calculations, specifications, reports, studies, etc.).**

Note: An exception to the PDF standard requirement is that stormwater modeling files may be submitted in their native formats (e.g. .whm, .wh2, .mgs).

DRAWING STANDARDS

- All text shall be readable and no font shall be smaller than 10 point or equivalent.
- All sheets shall be oriented so that the top of the sheet corresponds with the top of the computer monitor.
- A 5" x 5" space shall be left blank in the bottom right-hand corner of the first sheet/cover sheet of the drawings for the City of Tacoma to insert an approval stamp.
- Each plan sheet needs to include the project name and address.
- Plans cannot state "Not for Construction." Plans may state "For Agency Review".
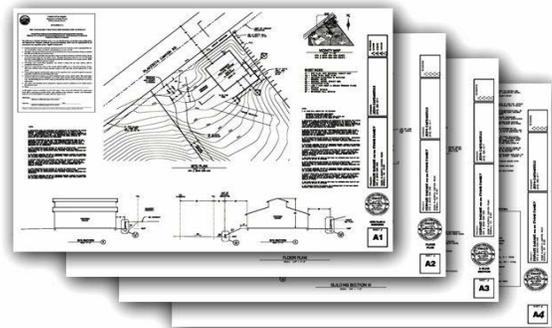
plans.pdf (multiple sheets)
✓Correct
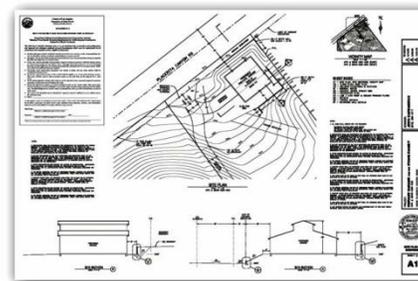
✓Correct

All sheets must be consolidated into one plan set up to a maximum size of 50 mb whenever possible.

Electronic File Standards
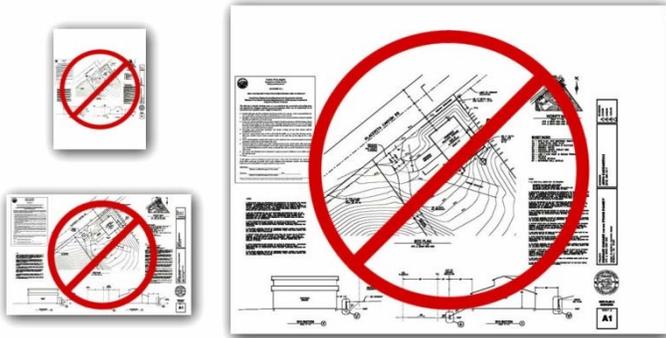
Incorrect sheet size, scale, or margins will not be accepted.
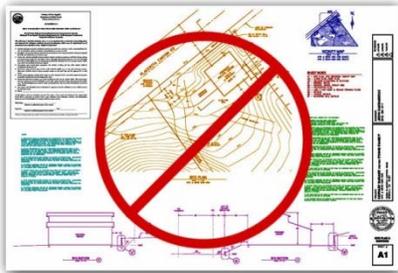
Color plans will not be accepted.

Incorrect orientation will not be accepted.

FILE NAMING REQUIREMENTS:

Files must be named to concisely to describe the contents of the file document. Applications with files not named consistent with examples listed below may be rejected:

- Pre-Application Notes
- Architectural
- Structural
- Landscape Plan
- Civil
- Plumbing
- Mechanical
- Electrical
- Energy Forms
- Specifications

- Geotech
- Traffic Generation Memo
- Specifications
- SSP
- SWPPP
- Hydrology
- Wetland Delineation
- SEPA Checklist

*Note: SEPA Checklists and/or work in the right-of-way require separate applications.

	File Name	Entity Type	Description	Doc Group
☐	LANDSCAPE	Record	LANDSCAPE DRAWINGS	Drawings
☐	SHORING	Record	SHORING DRAWINGS	Drawings
☐	STRUCTURAL	Record	STRUCTURAL DRAW...	Drawings
☐	GENERAL	Record	GENERAL DRAWINGS	Drawings
☐	ENVELOPE	Record	BUILDING ENVELO...	Drawings
☐	ARCHITECTURAL	Record	ARCHITECTURAL D...	Drawings

✓Correct

Incorrectly named files will not be accepted.

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FORMATTING Q&A:

Question: Why does the City of Tacoma only accept PDF plans for most documents?

Answer:
Tacoma is responsible for maintaining records of plans and providing the public with access to them. Files kept in our electronic database must be compatible with a wide range of computer software for storage, viewing, and printing. In addition, the file sizes must be manageable for transfer and for use by the public and City staff. The only files allowed in a different format are stormwater modeling files (e.g. .whm, .wh2, .mgs). The PDF standard is constantly evolving and Tacoma will continue to evaluate these standards as necessary.

Question: Are raster-based PDF files acceptable?

Answer:
Yes, assuming they meet the size limitation requirement of no more than 50 mb total. Vector-based PDF files are typically much larger than raster-based files. However, the City prefers vector-based files given the ability to scale these files.

Question: How do I combine multiple PDFs into a single file?

Answer:
There are numerous PDF tools freely available on the Internet, which can be used to merge, rotate, and rearrange PDF files.

Question: How do I convert a vector-based PDF to a raster-based PDF if my file size is too large?

Answer:
The industry standard software for working with PDF files is Adobe Acrobat; however, there are numerous PDF tools freely available on the Internet.
Step 1: Save the vector-based PDF files as raster images (TIF or PNG). The format of the raster images is important (300 ppi, monochrome). We recommend TIF files with LZW compression.
Step 2: Convert the raster images back to compressed PDF files.
Step 3: Merge the individual PDF files into a single multi-sheet PDF file.

Question: My PDF files are too big. What am I doing wrong?

Answer:
Properly formatted and compressed raster PDF files should not exceed 1MB per sheet. If your files are larger, you may have made one of the following errors:
Saving the plans as 8-bit (grayscale) or 24-bit (full-color) raster files will drastically increase the file size. Even if the images contain only black and white objects, 8-bit and 24-bit files still contain all of the shade and color data. Plans must be saved as 1-bit (monochrome).
Uncompressed files are much larger than compressed files. Construction plans contain mostly white space. The data required to store this white space can be significantly reduced. When converting your PDFs to raster images, be sure to use a form of lossless compression (such as LZW). When creating or saving PDF files, remember to specify "compressed."

Question: Some raster images are loading slowly in the PDF reader. What am I doing wrong?

Answer:
Transparent raster images require considerable resources to display. Even though the source image is not transparent, your CAD software may be plotting it with transparency (white pixels plotted as see-thru). Be sure to set image transparency "off" before plotting.

Question: Why does the City of Tacoma require specific file names?

Answer: Naming files to properly describe the contents of the file document will help reviewers identify more quickly which files they need to review. Comments from reviewers will be sorted by documents and by discipline. Revised file documents will need to be uploaded by applicants and improper or inconsistent naming of files will create delays in review of your application. Applications with files that are not named correctly may be rejected.

RESOURCES
Tip Sheets
Resource Library
Permit Review Level of Service