DFM Drawing Standards

(Revised June 29, 2018)

The Project Architect/Engineer is responsible for the review of all Design Document submittals. DFM will not accept a submission from contractors or consultants. The requirements for each level of review (PS, SD, DD and FD) are on checklists which must be submitted with each package to be reviewed.

SUBMITTALS REQUIREMENTS:
Design Document Review Submissions
    a. Two copies of paper drawings indicating level of review sought (PS, SD, DD and FD).
    b. One copy of the Project Specifications.
    c. Two copies of Review Checklist. No design or bid document will be reviewed without the "Required" checklist items initialed and submitted by the Registered Professional in charge of the project. On some projects where the initial submittal is Schematic Design, all Information and Documents for a Preliminary Schematic Review are required in addition to the Information and Documents for the Schematic Design.
    d. Two copies of all required checklist items for each level of review are required.
Project Closeout Document Submission
    a. Two copies of "as built" paper drawings (signed and sealed)
    b. Two copies of electronic "as built" drawings on compact discs (one PDF and one AutoCAD set on each disc). The "Plot Style Table" (.ctb file) for AutoCAD Drawings shall be included. Each CD shall have a label with the following information: Project Name, State Project Number, Firm Name, Date and Contents. Discs shall be submitted in a slim type jewel case. The case itself is not required to have a label.

GENERAL DRAWING STANDARDS:
Cover Sheet
1. The top of the Cover Sheet shall prominently display the customer's name (3/4" high), the project name (1" high) and the name & address of the site where the work is to be performed (3/4" high). **For example:**

STATE OF DELAWARE
OMB/DIVISION OF FACILITIES MANAGEMENT
OMB/DFM CONTRACT #XX0000000000

PROJECT TITLE

AT
Building Name
Street Address
Town, Delaware, Zip Code
For:
THE DELAWARE DEPARTMENT OF _____

2. The bottom of the cover sheet shall have three maps: (required for PS, SD, DD and FD)
    a. A "Location Map" showing the location of the project in the State.
    b. An "Area Map" showing the location of the project in its County or Region.
    c. A "Site Map" showing the location of the project on the Site.
    Note: Each map shall have a North Arrow
3. The Title Block info must contain the same elements on all sheets. The Architect or Engineer in charge as well as consultants must be included with addresses and phone numbers.
4. The Cover Sheet may also contain an image of the building (either a photograph or a rendering).

Drawing Contents
1. Cover Sheet. Following the Cover Sheet, sheets should be organized into discipline-specific subsets.
2. Drawing List (PS, SD, DD and FD) may also be on the Cover Sheet if space is available.
3. Site Plan with parking, drainage profiles (when applicable) and ADA information. (PS, SD, DD and FD)
4. Test borings and Geotechnical data (when applicable, may be submitted in a separate report). (SD, DD and FD)
5. Code Review and other relevant information. (SD, DD and FD)
6. Legend, symbols, and List of abbreviations. (PS,SD, DD and FD)
7. General Notes and specific Drawing Notes and Details. (DD, FD)
8. Life Safety Plan. (DD and FD)

PS= Preliminary Schematic Design (15%)
SD= Schematic Design (30%)
DD= Design Development (60%)
FD= Final Design (90%)

Title Block (All Sheets)
Each Sheet (including sketches) shall have a title block that includes the following items:
1. Project name.
2. State Project Number.
3. Building name and address.
4. Date drawn and any subsequent revisions.
5. Type of document submission (i.e. Agency Review-15%, 30%, 60% or 90%), Construction Document or As Built.
6. Drawing scale, sheet title and sheet number.

Suggested Drawing Numbering (the ConDoc System)
Each discipline should be subdivided into groups. For example:
G= General   G001, G002, etc. (Cover sheet, front end docs)
TS= Topographic Survey
SB= Soil Boring data
SD= Site Demolition
C= Civil
L= Landscaping
D= Demolition
A= Architecture   A000, A001, etc. (schedules, keynote legend)
                       A200, A201 (plans, building sections)
                       A300, A301 (vertical circulation, core plan and details)

A400, A401 (reflected ceiling plans and interior details)
A500, A501 (exterior envelope, details
A600, A601 (interior details and door schedule)

S= Structural
M= Mechanical
P= Plumbing
FP= Fire Protection
E= Electrical

The View Title on a Plotted Drawing

Each view on a sheet shall be labeled with the following items:
1. View number (sections and details must reference the sheet the callout is on)
2. View title (for example- Floor Plan). The text should be ¼" high in paper space and underlined.
3. Beneath the view title, show the scale (for example, Scale: ¼"=1'-0"). That text should be 1/8" high in paper space.

Text Size

All text shall be 3/32", 1/8" or 1/4" high on paper (when plotted at full size).

Fonts (AutoCAD Only)

All font selections should be Standard AutoCAD or Windows fonts. If non-standard 3rd party fonts are used in digital drawings, please provide a copy of the font file.

Scale, Units and Paper Space

Views are to be drawn in Architectural Units except for Site and Civil Plans which are to be drawn in Engineers Units, full size in Model Space then scaled accordingly through a Viewport in Paper Space. Viewports should be created in Paper Space (sometimes referred to as Layout Space) using a layer that is configured not to plot such as the Defpoints layer. To insure that the scale of the Viewport doesn't change, the Viewport should be "locked".

Note: All AutoCAD drawings submitted on CD for Archival purposes must be made to plot from Paper Space. "Workarounds" created 100% in Model Space will not be accepted.

Plotting and Lineweights

Drawing submittals shall be "C", "D" or "E" size. The preferred size is "D" (24"x36"). If a drawing is plotted at half of its normal size and submitted for review, all text and dimensions must be legible.

It is a widely accepted practice for most firms to plot AutoCAD drawings using a method referred to as "Color Dependent" where a Plot Style Table is selected for the drawing in the Plot dialog box. The Plot Style Table dictates the plotted lineweight for an object based on its color. When you submit final "As Built" AutoCAD drawings on a CD for "Closeout", you must include a copy of the Plot Style Table (.ctb file) used by your office when plotting the subject drawing or we will not be able to plot and see proper line weights.

External References
In the event that an AutoCAD drawing file contains External References (xrefs), the attached xrefs must be bound to the drawing using the Insert option of the Bind command before putting the drawing on a CD.

External References or xrefs as they are also known can be a very good way of not having to redraw a floor plan in a ductwork or fire sprinkler drawing.

When you attach a floor plan from one folder on your PC to a Duct drawing in another folder, every time you try to open that Duct drawing, AutoCAD looks for that folder that contains the floor plan. When you put the "As Built" Duct drawing on a CD and send it to DFM for Archiving, it is likely that the floor plan is missing at DFM. The problem occurred when you copied the Duct drawing to the CD without binding the xref or xrefs first.

The proper way to bind an xref (if you have never done it before) is to click on the Insert tab, reference panel and select the reference name that you want to bind. Right click and select Bind. In the Bind Xrefs dialog box select the "Bind" option.

Once the xref is bound, save the drawing, then put it on a CD. The xref (maybe the floor plan) is now a permanent part of your drawing.

File Format
All AutoCAD drawings are to be submitted in the 2017 (or earlier) format. You can use "plain vanilla" AutoCAD or AutoCAD LT. We also accept drawings that were created in AutoCAD MEP or AutoCAD Architecture. All of these formats are acceptable

For large drawing files, we recommend that you purge the drawing to delete unused or unwanted named items such as blocks, layers, dimension styles, etc. After you do a purge, especially if you started with a Company Template that's been around for a while, then do a save, you will most likely be amazed at how small the file has become.

Drawing Submittals
Each set of paper drawings submitted shall be stapled together. Loose drawings will not be accepted.

STATE OF DELAWARE
OMB/DIVISION OF FACILITIES MANAGEMENT
OMB/DFM CONTRACT #XX00000000000

PROJECT TITLE

AT

BUILDING NAME OR NUMBER
STREET ADDRESS
TOWN, DELAWARE, ZIP CODE

FOR THE:

THE DELAWARE DEPARTMENT OF _____

Project Location	**Site**	**Building Name**	**Drawing Index**
Building Name		[Shade Building Area]	
Building Address			[Match to]
[City], Delaware [Zip]			[Drawing Sheet Titles]
			[Coordinate to Project Manual]
			[00 01 15 List of Drawings]
	MAP OF PROJECT	MAP OF SITE AREA	
MAP OF DELAWARE	LOCATION AREA	[Closest Secondary Roads/Streets Noted]	[Full Anticipated Listing]
OR COUNTY	[Closest Primary Route/Road Marked]	[Building Prominently Identified)	[Marked Not Included at This Time]
			[as appropriate]
Location Map	**Area Map**	**Site Map**	
[True North Arrow Shown]	[True North Arrow Shown]	[True & Project North Arrows Shown]	