

Connecticut Code Chronicle

An occasional publication by Harwood Wallace Loomis, Consulting Architect,
for the use and information of the design and code enforcement communities

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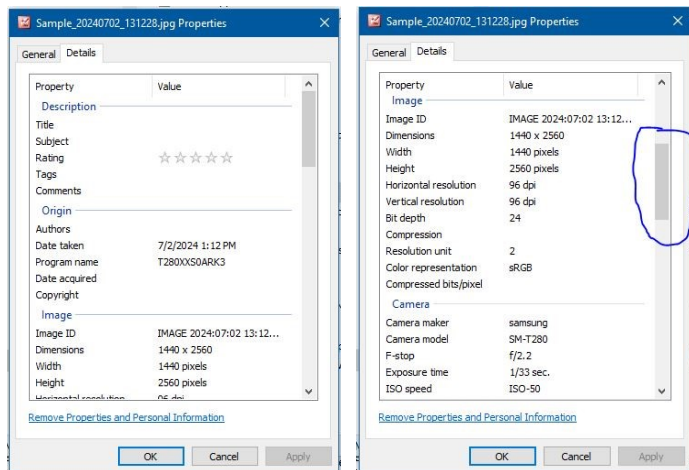
SEPTEMBER 2025

DOCUMENT SECURITY AND INTEGRITY

For this month's lead article, rather than delve into the nuances of the codes I'd like to discuss documents and record keeping. Due to the time constraints of doing everything we need to do in the course of fulfilling our duties, it's easy to forget that everything we produce—every document, e-mail, sketch or photograph—is a public record. Many building officials (but perhaps fewer assistant building officials) are probably aware that the State Library has a document retention schedule that dictates how long the department has to retain each type of document or record.

You may not be aware that the State Library also has issued a series of documents that spell out the formats of documents that we produce and retain. One of the key elements is that the State is looking ahead toward digital storage of records. A key component of making digital documents useful is the ability to search and retrieve them digitally. Central to this is *metadata*.

If you haven't been living under a rock, you've probably encountered the term "metadata," but ... what is it? In a nutshell, it's information about the information. Sometimes metadata is created for us automatically, such as with digital photographs. Any time you take a photo using a digital camera, a tablet, or a smartphone ... the device automatically records a lot of information, such as the date and time the photo was taken, what device was used to take the photo, and a lot more. Here are two screen grabs of just some of the metadata recorded when I used a Samsung tablet to take photos of a building for which I was reviewing plans for an alteration:

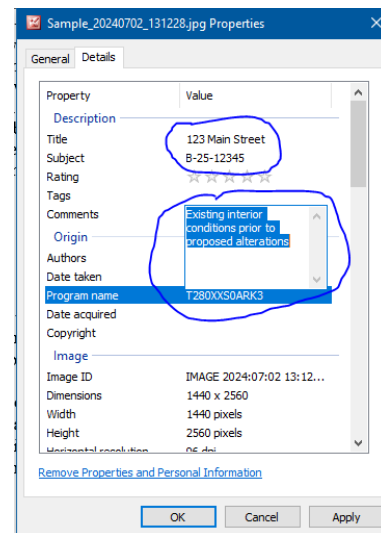


As can be seen from the position of the slider on the right, there's a lot more information about this one photo that's created automatically. What's not recorded automatically, but which the State would like entered in order to facilitate future searches, are the fields for Title, Subject, and Comments. This is where we can

enter information that connects the photo to the application or permit or—at least—to the address.

There are ways to manually add this missing information. In Windows, this is done from the Properties window shown in the screen grabs. Double click on the right side of the window on the same line as the property you want to edit, and a window pops up to allow entering the information. The problem is: who has time to do this for every photo they take? None of us ... but it's time to start thinking about a policy, because the State Library is in the process (supposedly) of revising the document retention schedule, and the revision is almost certainly going to address digital (electronic) records and metadata.

The screen grab below shows what the metadata panel looks like after editing to add some information linking the photo to an address and a permit application number:



If your department uses digital permitting software, the program is supposed to take care of all the record keeping and record integrity. Fortunately, that puts it out of our hands and under the control of the municipality's IT department. That's their job; they can have it. For example, many municipalities in Connecticut use Muncicity. It has good aspects and not-so-good aspects but, from the perspective of building department personal, Muncicity is transparent. It does all its record keeping behind the scenes so all we have to do is figure out which screen we should be on to enter a comment or an inspection result, and Muncicity takes care of everything else..

What about records we create outside of whatever permitting package the department uses? These are the kinds of records the State Library's retention schedule addresses. Their concern is the long-term retention, preservation and retrieval of the information.

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One of the keys to that is record integrity. The State doesn't want it to be possible to alter public records, and especially not to alter them without any evidence that they've been altered.

Why should this be a concern for us as building officials? Because, unfortunately, there are dishonest people in this world, and there are times when the dishonesty affects what we do. An example of physically altering a record document occurred very early in my career as an architect. The firm I worked for had designed a large factory to be built in a rural town in Connecticut. There were no public sewers, and the site adjoined a river. The septic system was a sophisticated "dosing" system that was designed by a licensed civil engineer and reviewed by the State Health Department.

One day, after construction had started, I received a telephone call from a very irate inspector from the State Health Department, asking why we had modified the septic design without getting State approval. I told him we hadn't, and that I still had the original, approved, unmodified drawings in the plan file. It turned out that the contractor's project manager had made a sepia of the approved plan, complete with the engineer's seal, redesigned the septic system to make it easier and cheaper to build, and gave prints of the modified drawing to the site contractor.

A decade or so back I reviewed a drawing for an in-ground swimming pool that just "didn't look right." There was an engineer's seal on the drawing but it was a print of a print and difficult to read. I was able to make out part of the engineer's name and part of the license number. I called the Department of Consumer Protection and spoke with the woman in charge of engineers' licenses. She called me back the next day and said she had good news and bad news. The good news was that she was able to find the engineer. The bad news was that he had retired to Florida several years prior, and he was deceased. The swimming pool company was reproducing a copy of his seal on plans that he (obviously) had no involvement in.

Much more recently, we caught an engineer copying the foundation details for a pre-engineered metal building from another project in town. The problem was this his building was twice as wide and fifty percent higher, so all the loads were increase—significantly.

The point is that, like identity theft, document forgery is a fact in today's society. It's a felony to tamper with public records, but we wouldn't need a law against it if people weren't doing it. The State Library wants public records to be protected against illicit alteration as much as possible. To accomplish this, they have issued a series of guidelines for the creation and preservation of public records—including digital records. The requirements are far too extensive to allow reproducing them in a newsletter, but I encourage department heads to download the documents and review them. The documents to search for are:

- PRP 04
- PRS 04-1
- PRS 04-2

The key information regarding the need for creating metadata comes from PRS 04-1. The same document also discusses acceptable digital document formats. Considering the desire to

protect records against unauthorized alteration, I was quite surprised to see that Word .doc and .docx files and Excel .xls and .xlsx files are acceptable. My preference—and my recommendation—is to send out any documents in PDF/A format (which makes it easier to see if the document has been modified). However, that isn't appropriate for internal drafts and working documents. I strongly recommend PDF/A for any letters or memos you send to applicants, property owners, or contractors.

The PRS 04-1 requirements addressing metadata are as follow:

A. *General.* Whether embedded into image files or captured in an information system, **metadata** provides information explaining what each record contains, when and why it was created, what media it was recorded on, original dimensions, and whether any restrictions govern its access and use.

1. Depending on the public agency's existing record-keeping practices and level of intellectual control, the public agency may use information from the record series, file, or project as the source for administrative and descriptive **metadata** fields. If the components of a record have not been individually indexed with unique descriptions, the public agency may apply the series or file level descriptions to all records within that grouping. If the components of the record do not have individual titles, the public agency must apply unique identifier(s) instead.
2. Appropriate and accurate **metadata** (index) information is required to properly identify and later retrieve electronic records.
3. Indexing typically consists of a structured format and controlled vocabulary that allows more precise description of a record's content and often includes information such as record type, creation date, last modified date, last modified by, record creator, and disposition date, among other information.
4. The public agency shall be responsible for defining the specific **metadata** requirements needed to access the records efficiently.
5. Indexing shall comply with the specific requirements of the public agency and include a unique identifier for each electronic record. Unique filenames or other identifiers are preferably sequential and can be numeric, alphanumeric, or alphabetic as required by the public agency. They should be unique across all record series and storage media.
6. The index of electronic records should consist of a limited but sufficient number of field names to ensure adequate access to the records. Whenever possible, the field data should consist of objective indexing terms (such as personal names, file numbers, retention schedule numbers, and dates) from a controlled vocabulary, rather than subjective data.
7. Optical Character Recognition (OCR) can be performed to convert records into searchable text. Due to error rates, OCR should not be used as the sole tool for the retrieval of electronic records, and it is not a substitute for indexing and production **metadata**.
8. **Permanent records only:** If the public agency provides other **metadata** elements in addition to the metadata requirements in this section, the Connecticut State Library will accept that **metadata** as part of the transfer process.

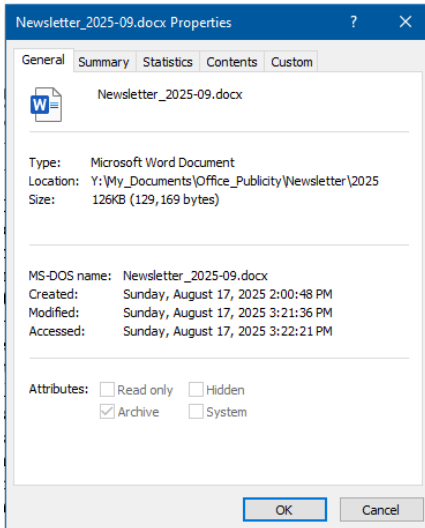
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9. “Mandatory if applicable” instructions in the tables in this section mean that public agencies must provide the **metadata** if the public agency captures the **metadata** as part of its business processes. Public agencies do not have to create “mandatory if applicable” **metadata** as an extra step to transfer records to the State Archives.
10. “Strongly Encouraged” instructions in the tables in this section mean that public agencies are strongly encouraged but not required to capture or create this **metadata**.
11. “Suggested” instructions in the tables in this section mean that it is only a recommendation that the public agency consider capturing or creating this **metadata** but it is not required.

B. Overall requirements.

1. For all electronic records public agencies must:
 - a. Capture the **metadata** specified by paragraphs C, D, and E of this section at the record series, file unit or project level.

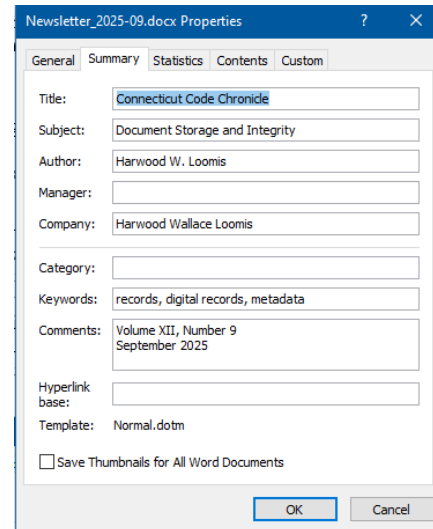
There’s a lot more, but this offers an introduction. Notice that many of these requirements talk about *metadata*, and the need to create it. When we create a document in Word, for example, Word automatically creates a certain amount of metadata. It records the date and time the document was originally created, the date and time it was last modified, and (if your system is set up with a user name—most are) the user name or initials of the person who created it.



There are several other screens, accessed from the tabs at the top of the Document Properties window. None of the information created automatically provides the kind of metadata the state Library wants us to maintain. There’s nothing automatically created that links a file to an address, a building permit number, or an owner’s name. Basically, there’s nothing created by Word that would allow a future search to find the document based on the information someone might have when looking up information about a property.

We can (and should) enter that information each time we create a document in Word or Excel. It’s easy to do; the problem is that it takes time to do it. It’s not a lot of time, but it’s time. It

also means that each member of the department who generates documents in Word or Excel has to be trained to remember to enter the metadata when saving the document for the first time. It’s done from the Summary tab in the Document Properties window. Just fill in the blank fields:



In 2022 or 2023 the State Library sent out a notice to the Town Clerks of all Connecticut municipalities, instructing them to come up with a written policy for electronic and digital records that complied with PRP 04, PRS 04-1, and PRS 04-2 by a certain date. Virtually no towns did anything. As the official custodian of public records for municipalities, it was the responsibility of the Town Clerks to come up with these policies. What actually happened was that most Town Clerks decided to wait until some other town had a policy approved by the State Library, so they could just copy it. Needless to say, it never happened.

Most recently, the State Library retracted the deadline and said (in essence), “Never mind. We’ll draft the policy for you and send it to you when it’s ready.” That hasn’t happened yet ... but it’s coming. When it comes, it will be mandatory. The purpose of this article is to let you know what’s coming so you can have time to prepare yourselves and your staff for the forthcoming requirements. I would suggest opening a line of communication with your Town Clerk, if you don’t already have one, so you can get their perspective on what policies and procedures you may need to modify or create.

It might also be a good idea to plug some extra money into next year’s budget for additional training for your staff, including the administrative staff who have to deal with handling and storing documents and digital files.

Changing work habits is always a nuisance. Even if a new task is simple, it’s new and different. It requires time and repetition to learn new habits and to unlearn old habits. The sooner you get your department started on dealing with metadata, the easier it will go when the new requirements come into effect.

ROGUES' GALLERY

I had a medical appointment recently in a fairly new (first occupancy 2021) office condo. While I was there I used the rest room. See how many accessibility violations you can spot in these two photos:



Here's what I've come up with (in no particular order):

- The water closet is standard height, not accessible height
- The privacy function in the door hardware is activated by a small thumbturn in the handle. Requires tight grasping, pinching, and twisting of the wrist to operate. (The lockset on the door from the building lobby to the waiting room uses the same design thumbturn. The exterior door serving the lobby has a conventional deadbolt with a conventional thumbturn.)
- Single-occupant toilet rooms must have a call-for-aid pull switch, with an annunciator in a normally visible location. Not here.
- Angled wall occupies required approach clearance for the door.
- Flush handle is on the wrong side of the water closet.
- Rear grab bar is too short.
- No vertical grab bar.
- The coat hook is mounted too high.
- The lavatory overlaps the required clear floor space for the water closet.

- The trash receptacle is in the required approach space for the door.
- The knick-knack shelf stand is in the required clear space for the water closet.
- It's not readily visible in these photos, but the toilet room itself is about a foot too small in both dimensions.

Considering that this is a new building *and a medical office*, it raises the question of just what the architects were thinking when they designed it.

We know that some mayors, first selectmen, and town managers think time spent doing plan reviews is time wasted, and that we should just find all the problems in the field during construction. This is a perfect example of why that's an unsupportable approach. It's far easier to move lines on a sheet of paper or a computer screen than it is to rip out walls that have already been framed, and (probably) have to redesign the entire office plan because the toilet room is too small and doesn't meet code. Plan issues should be addressed during plan review. Construction issues should be addressed during construction.

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The editor is a licensed architect and a licensed building official, with more than 40 years of experience. I offer non-structural plan review services for projects of any size, with special rates for municipal building departments.

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What topics would you like to see discussed in future issues? It helps all of us if we can all be on the same page, to avoid those “But I never have to do that in [town]” complaints.

Send me an e-mail if you think of any issues that affect all building officials, everywhere.