

### History: As-Built Submittals on Microfiche

Construction record documents are prepared as part of a construction project to show any changes from the original approved plans and the actual conditions as installed in the field. They are often referred to as “as-built” or “red-line” plans and specifications.

In order to maintain an accurate record of the facilities at a wastewater treatment plant the Minnesota Pollution Control Agency (MPCA) requires the submittal of record documents. To ensure the long-term usefulness of the document the MPCA has required that they be submitted on microfiche. A condition of a facility’s discharge permit and plans and specifications approval is that a copy of the as-built plans and specifications be submitted on microfiche. In addition, any project that receives financial assistance from the State of Minnesota is required by rule to submit a copy of plan and specification record drawings on microfiche (Minn. R. 7077.0288).

---

### New: As-Built Submittals in Electronic Format

While microfiche may seem to be an outdated technology, it is still one of the most reliable and robust methods of long term document storage. However, the ease of accessibility of electronic documents and the increasing cost of preparing microfiche has lead to a change in the current policy. The MPCA has recently acquired computer software/hardware that will allow for the acceptance and reliable storage of large document files of the type typical of plans and specifications.

***Effective February 1, 2011, the MPCA municipal and industrial wastewater treatment programs will now accept submittals of record documents (as-builts) in electronic format!***

Permit and approval requirements will continue to require the submittal of as-built documents that show actual constructed facilities. When as-built record documents for wastewater treatment facilities are submitted in accordance with the following requirements they will be considered as equivalent to microfiche. During the transition period to electronic submittals, microfiche will still be accepted for projects that are in the process of having them produced, but an electronic version may also be requested.

---

### Electronic Format Requirements

- Final **signed** project record drawings shall be submitted as a Portable Document File (.pdf). **No other format will be accepted.**
- The submittal shall be a single file for plans, with all plan sheets combined into one file.
- The submittal shall be a single file for specifications. In some large projects, specifications may be prepared as multiple volumes. In these cases, the submittal may include a separate file for each volume with a file name to indicate the volume number, such as “Volume 1 of 2”.
- The submittal shall be a single file for each addendum issued.
- The submittal shall be a single file for each change order executed.
- Plan drawings shall be legibly marked to record actual constructed conditions and include the following information:
  - the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) permit number for the facility
  - the assigned MPCA project number (i.e. 27\*\*\*\*, or 28\*\*\*\*)
  - measured depths in relation to established finished datum
  - measured horizontal and vertical locations of underground utilities, structures, or other appurtenances concealed in construction and referenced to visible and accessible features
  - field changes of dimensions and details

- any other details not included on the original approved contract drawings, including all changes made by addendum or change orders
- deviations from the original approved drawings shall be clearly shown on the record drawings in red (“red-lined”), or highlighted with a similar clearly distinguishable notation.
- Specifications and contract documents shall be legibly marked to record actual construction conditions including:
  - the NPDES/SDS permit number for the facility
  - the assigned MPCA project number (i.e. 27\*\*\*\*, or 28\*\*\*\*)
  - manufacturer’s name and product model and number for equipment installed.
  - product substitutions or alternates used
  - changes made by Addenda, change order, or other contract modifications
- Document files shall be submitted on a non-returnable compact disk or USB storage devise (aka: pen drive, flash drive, etc.)
  - The MPCA staff e-mail accounts have limited capacity and are unable to accept large submittals by e-mail. If the total cumulative size of all attached documents is greater than 15MB they cannot be submitted via e-mail. Contact the MPCA staff engineer assigned to your project to determine their preferred method of submittal.

### **Plans and Specifications Submittals for Review and Approval**

Documents submitted to the MPCA for review and approval must still be submitted as paper copies. Two copies of paper documents are usually required. Work with the MPCA engineer assigned to your project to determine the preferred size of the paper plans for review.