



Connecticut DOT  
Bureau of Engineering and Construction

Number: 2015-1-E  
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**ENGINEERING DIRECTIVE**

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Engineering Administrator

**Development, Approval and Use  
of  
Standard Sheets and Guide Sheets/Details**

This directive updates and supersedes the July 23, 2008 memorandum on “CTDOT Standard Sheets, CTDOT Guide Sheets, CTDOT Guide Details”.

Currently, the Office of Engineering utilizes an inventory of Standard Sheets, Guide Sheets and Guide Details in the production of contract documents. This directive clarifies and documents direction related to these sheets and details.

Although there is a clear distinction between Standard Sheets and Guide Sheets/Guide Details, both have the potential to reduce the level of engineering effort needed to prepare contract documents. Consequently, their expanded use is encouraged.

**Standard Sheets**

These sheets indicate typical requirements (e.g., inlet and grate dimensions, replacement hardware inventories) of constructing or installing particular features. Information on dimensions, materials and hardware elements are provided through graphics, callouts and related notes.

Installations and structures shown on Standard Sheets do not require project-level design. Judicious use of Standard Sheets reduces design cost. Additionally, Standard Sheets are used to attain consistency and uniformity, when appropriate.

Currently, the Division of Highway Design and Division of Traffic Engineering have Standard Sheets for their disciplines.

**Development and Approval of Standard Sheets**

Given the potential cost savings, each division is encouraged to expand its use of Standard Sheets. Development of a Standard Sheet for a frequently-used item (e.g., inlet, rail), does not necessitate universal application of the standard design it portrays (i.e., design/construction of custom installations are acceptable).

Responsibility for preparing, maintaining (i.e., updating) and posting Standard Sheets resides at the Engineering division level. Format and technology specifications are provided in the “*CTDOT Standard Drawing Guide*” (revised version pending). Current Standard Sheets provide dimensions in US Customary (USC) and metric units. Future Standard Sheets should include only USC units.

Prior to approval and publication, all new and revised Standard Sheets will be circulated to all Engineering divisions and the Bureau of Highway Operations for review and comment. Comments from organizational units within other bureaus (e.g., Public Transportation, Planning) will also be solicited when appropriate.

New Standard Sheets and major Standard Sheet revisions shall be submitted to the Federal Highway Administration (FHWA) for approval. To expedite FHWA review and approval of Standard Sheet revisions, the correspondence requesting approval (i.e., email) should note the specific items being revised. FHWA review will be concurrent with the Department’s internal review as indicated above. FHWA approval should be secured prior to publication (i.e., availability for inclusion in contract drawings). Documentation (generally email) of FHWA approval will be retained.

Minor revisions do not need require explicit FHWA approval. FHWA should be notified of minor revisions. The notification should indicate the specific change(s). FHWA responds to minor revision notifications by exception only, when its review identified a violation of a FHWA regulation. Documentation (generally email) of FHWA notification/transmittal and any substantive response will be retained.

A Standard Sheet is “approved” upon placement of digital signatures by the responsible principal engineer and division chief. The [Digital Project Development Manual](#) includes detailed instructions for digital signatures on Standard Sheets.

### **Access and Use of Standard Sheets**

Following approval, as described above, Standard Sheets will be “published” by making them available in Portable Document Format (\*.pdf) on the Department web page. Standard Drawings should also be made available in Design (\*.dgn) format so that designers may access and modify content. However, *any* such modification causes the resultant drawing to be an individually-designed (non-standard) contract drawing sheet.

The division publishing the new or revised Standard Sheet(s) should draft an Engineering Directive for signature by the Engineering Administrator providing notice of issuance and identifying pertinent changes (e.g., dimensional changes, payment provisions).

Standard Sheets (i.e., unaltered pdfs) applicable to a particular construction contract are included in the contract drawings by the designer. A Standard Sheet index sheet, indicating the specific Standard Sheets in the contract, is also provided in the contract drawings as described in the [Digital Project Development Manual](#).

## **Guide Sheets and Guide Details**

Guide Sheets contain Guide Details, callouts and associated notes. Guide Details portray common design solutions that may be used, as depicted or with modification, for specific projects.

Currently, Guide Sheets for the following Engineering disciplines are available via the Department web page:

- Bridges,
- Environmental Compliance,
- Facilities,
- Highway Design, and
- Traffic Engineering.

Highway Operations Guide Sheets are also accessible through the Department web page.

In addition to those embedded within Guide Sheets, a limited number of Guide Details are also available through the Computer Aided Design (CAD) environment. Guide Sheets are a way of conveniently grouping related items and simplifying access. The principles governing development and use of Guide Details are the same, whether the detail is included in a Guide Sheet or elsewhere.

Guide Details (within or separate from Guide Sheets) are not “pre-approved” for use in contract drawings. The Engineer of Record is responsible for all details and contract drawings based on Guide Details or Guide Sheets, modified or not. The Engineer of Record is required to approve /sign all contract drawings except Standard Sheets.

## **Development of Guide Sheets/Details**

Reference to, and adaptation of, Guide Details can reduce the effort required to prepare contract drawings. Each division is encouraged to create, manage (e.g., organize for easy access, exercise quality control) and use a robust library of Guide Sheets and Guide Details.

Guide Sheets/Details should be made available as \*.pdf and \*.dgn files.

Guide Sheets/Details should not be signed or in any way noted to imply it is “approved”.

## **Access and Use of Guide Sheets/Details**

As previously stated, Guide Details are available via the Department web page and libraries maintained by various design groups.

Details based on Guide Details, with appropriate engineering review and/or modification, and approved by the Engineer of Record may be included in a contract drawing sheet.

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Development, Approval and Use of Standard Sheets and Guide Sheets/Details

A Guide Sheet, with or without modification, may be converted to a contract drawing sheet. Such a sheet requires the Engineer of Record's approval/signature. In this form, it is an individually-designed (non-standard) sheet and not a Guide Sheet.