**CONNECTICUT STATE DEPARTMENT OF EDUCATION (SDE)**
**BUREAU OF SCHOOL FACILITIES (BSF)**

# DOCUMENT PREPARATION

## GENERAL

1. Please have **all personnel** involved in the preparation of final plans and specifications **read each item** in each section of this entire manual and **adhere** to the instructions and/or requirements of each item.

2. **ALLOW AND USE ENOUGH TIME TO DO FINAL IN-HOUSE CHECK/COORDINATION OF CHECKLIST AND CONTRACT DOCUMENTS BEFORE PRINTING AND SUBMISSION TO THE BSF.**

3. The BSF reserves the right to perform a **final inspection** of the facility at completion of each phase of construction.

## DRAWING STANDARDS

1. Develop documents using **formats** as indicated in **Section 5.** Page layout may vary from samples in Section 5 of this manual as long as all information can be found on each sheet. Locate the "Cover Sheet" as the first sheet in the set, the "Information Sheet" as the second, and Code Reference Sheets next.

2. Submit **clear, readable** and **coordinated** drawings.

3. All drawing sheets must have the responsible architect's or engineer's registration **stamp with signature**. Corporate seals (by themselves) are not acceptable.

4. Show all required information on the **appropriate sheets** for that trade per industry standards. Coordinate and reference between disciplines when applicable. **Sheet** numbering, order, layouts, room names, and match lines shall be the **same between disciplines**.

5. All drawings shall be on **sheets** no larger than **30" x 42".** Sheet size shall remain consistent throughout the entire submitted set.

6. Minimum **scale** shall be **1/8" = 1'-0"** for architectural/mechanical/electrical floor plans (exception on page 3, # 7 of this section). All **plan drawings** shall be **oriented in the same direction** including key plans and North arrows for all trades. Key plans shall be appropriately shaded or otherwise marked to indicate which part(s) of the building or site is (are) applicable to that drawing sheet.

7. **Clarity** and **variation** of **line weights** is critical to identify material changes and to interpret the intent of documents for review **and** construction.

8. **Lettering** shall be single-stroke and a **minimum height of 9 pt.** but always must be legible. Documents that are mechanically reduced or information electronically imported from other sources shall maintain the minimum lettering size noted above.

9. Provide **complete symbols legends and general notes** for site, architectural, mechanical, and electrical plans. Symbols shall be as indicated in the *Architectural Graphic Standards* and the current applicable industry standards including those listed in Section 5 of this manual. **Provide** a **note** on the Information Sheet and on each sheet where symbols are used, indicating where the symbols legend(s) are located. **Always** keep legends to the **right** side of the sheet.

**DRAWING STANDARDS (cont.)**

10. **Abbreviations** shall be industry standard and located on the "Information Sheet" (See Section 5). Provide a note on each sheet where abbreviations are used, indicating where the legend can be found. **List all abbreviations used**.

11. **Dimensions** must be provided for all new construction (floor plans) and overall size of existing buildings on Code Reference Plans.

12. **Poche** all new construction (clearly differentiate existing from new, including on code sheets). Show all symbols used in a symbols legend.

13. Do **not** use **loose appliqués** or free-hand notes on the prints. All information must be on the original document prior to printing.

14. For limited scope projects use **screened backgrounds** for areas not included in the project(s) scope (when applicable). Maintain clarity and legibility.

15. The SDE requests that keynote systems not be used and work scope information be incorporated in the specifications or spelled out on the plans. If keynote systems (for work identification) cannot be avoided, the legend shall be on each sheet. Limit one number per note, see Section 5 of this document for symbols (work scope notes). Notify BSF **in advance** if use of a keynote system is **unavoidable**.

16. **Name all classrooms, areas, academic grade levels, and room numbers** at each room, on all architectural and engineering drawings (such as shops, labs, art rooms, home economics, storage, custodian, and all other specialty rooms). DO NOT use room numbers keyed to a legend. Provide plumbing fixture locations on electrical power plans.

17. Provide **separate demolition** plans with original room names.

18. Doors shall be numbered **sequentially** on door schedule. Also, sizes on the top of the door schedule shall be arranged sequentially by width (refer to Section 5 of this document). The BSF strongly recommends that the **door numbers follow the room/space number,** and the first door numbered for a space has the sub letter "A" even when the space only has one door.

19. **Reference windows**, glazed openings, and fenestrations on the Architectural floor plans.

20. Label **stairs** with the same number at all floors, i.e. Stair #1 First Floor, Stair #1 Second Floor, Stair #1 Third Floor, etc.

21. **Shade** new plumbing **fixtures** on plumbing drawings and **ducts** that penetrate floors on mechanical drawings. Clearly **show locations** of water sources (sinks, drinking fountains, etc.) on electrical power plans.

22. Provide specific and accurate **references** to details from origin drawings (plans).

23. **Check** all required **structural loads** for compliance with Chapter 16 of the State Building Code.

**DRAWING REQUIREMENTS**

1. Utilize previous **plan review records** from previous projects to avoid repeating errors and omissions.

2. The **state project number, phase number,** and facility **address** are required on **all** drawing sheets, on the specifications (cover page, Table of Contents, and bid forms), and on **all** forms and correspondence. The drawing sheet number shall be located at the lower right hand corner.

3. Show **all items** (new and existing when applicable) identified **on** BSF **Checklists**.

**DRAWING REQUIREMENTS (cont.)**

4. Please provide a **duplicate set** of Code Reference Sheets with code information and Overall Site Plan (separate from the submitted set of review documents and not required to be stamped/signed).

5. Clearly show compliance with **code** requirements, function, operation, features, and information pertinent to items **on** the contract **documents**. Avoid submission of catalog cuts. The code(s) shall not be cited, or the terms "Legal" or its equivalent used as a substitute for specific information (i.e. do not only state an item is in compliance with a code without actually diagramming compliance).

6. Code compliance issues **within the project scope** cannot be addressed as an **"alternate"** to the base bid. **Compliance** must be part of the **base bid** work. Also, **all** alternates (including "Voluntary Alternates" requested by the bid documents) must be included for review prior to bidding (or as an addenda or change order) for the appropriate phase (see Section 3).

7. The **Code Reference Sheets** (see Section 5 of this manual) shall show each entire floor, each on a **single sheet** (with overall dimensions) with a minimum scale of 1" = 20'-0" (a smaller scale requires prior BSF approval). This sheet shall also include the information outlined in Section 5. Most educational facilities are "Mixed Use" occupancies and many are comprised of multiple buildings separated by fire walls or rated exterior walls. Therefore, more than one set of height and area calculations may be required to be submitted. This information must appear on the Code Reference Sheet(s) and be referenced on the BSF checklist. **Provide "Code Information"** (shown in Section 5) **for all projects**.

8. Fixtures, furnishings, and equipment (FF&E) which are part of the project scope (provided by either contractor or owner) shall be clearly **described** within the submitted documentation. Detail, dimension, or describe **accessibity** requirements for new, existing, or relocated FF&E. **Show** all wheelchair footprints and required clear floor spaces (see Section 10).

9. In a case where an **existing building** is receiving an addition that is separated from the existing by a fire wall or creates two separate buildings with rated exterior walls, the existing building may be **losing accessible street frontage.** The State Building Code height and area must be checked to verify that the existing building is still in compliance.

10. Label all firewalls, all fire rated assemblies, all smoke barriers where required by code (on code reference plans, architectural floor plans and structural plans), and provide details (architectural and structural). Show lot lines (actual and "imaginary"), exterior wall ratings, and percentage of rated and nonrated openings (allowed by code and provided) when required by code. Provide **Fire Test Design numbers with hourly ratings** for all rated walls and assemblies (including existing when required by the project scope).

11. Assembly areas shall have **seating** locations for persons with disabilities that are integral, dispersed, and have fixed companion seating. **Show** all wheelchair **footprints** and required clear floor spaces. "Listening systems" for the hearing impaired are frequently required. "Removable fixed seating" or "removable bleacher seating" is not permitted at required accessible locations. If within the project scope **auditoriums** with fixed seating shall show all fixed seating, aisle dimensions, and catchment areas. **Gymnasiums** in the project scope shall show floor striping, bleachers (length and number of seating tiers), dimensions, etc. One assembly space is required to be calculated at 7 square feet per person or a posted load (not more than 15 square feet per person without a modification). Occupant loads for new assembly spaces with bleachers are calculated at the bleacher count plus 7 square feet per person (15 square feet for existing) for the remainder of the open space (minus aisles). Indicate the occupant load of courtyards based on the intended use of the space. If the occupant load of courtyards is zero, then provide a letter from the Superintendent of Schools (copied to the local B.O.E) stating that the courtyard will never be occupied except for maintenance reasons.

12. Refer to Chapter 16 of NFPA 1 Uniform Fire Code and NFPA 241 for the required protection, escape facilities, safeguards, etc. in buildings undergoing construction, demolition, additions, and alterations. Also C.G.S. Section 29-408 requires an 8-foot high fence or barricade along the street line for the duration of building or structure demolition operations.