



## **State College Area School District**

The following is a guideline for project design submittals to the Facility Committee of the State College Area School District. During the design process the committee must review three progress stages. They have been designated as 30%, 60% and 90%. If deemed necessary, the committee may require a final review after 90%, bringing the total reviews to four. At each review, members of the committee, along with representatives of the building in question, will be present. The group size will range from 10 to 20 (possibly more). 7 days prior to the review, members will be provided with .pdf copies of the drawings and .doc copies of any applicable specifications. The presentation should be sensitive to the size of the group and be presented with full size documents, reduced copies of key portions for each member and as many visual aids as necessary to accurately portray the project to the entire group.

Following the presentation a written list of questions and concerns will be forwarded to the design professionals within five working days. This list should be responded to specifically in writing at the following review. Verbal review of the response may be in the form of a preface to the next review or incorporated into the review itself (this will be dependent on the nature and extent of the questions).

The presentation will generally take place at one of the committee's regular monthly meetings. These meetings are held once monthly at 4:00 p.m. The meeting should last two hours but depending on the size and complexity of the project, multiple meetings may be required. If a complete written submission is not ready one week in advance, the design professional must at minimum submit an outline of the presentation along with the following; key areas for consideration, any expected deviation from submission requirements, and any unusual circumstances or problems. As many members of the design team as possible should be present to answer questions during the meeting. A thorough and well-presented submission will ensure that the design phase proceeds smoothly.

## **30% REVIEW**

This review may be the first exposure many at the meeting have had to the project. An overview of steps leading to the project and general description of work should precede the presentation of required documents. This phase should present several alternate solutions to the project requirements. If only one plan is presented, the process of identifying this solution must be identified and the plan justified.

Many elements are required but the key aspects of each review (30/60/90) are:

1. Plancon process (if applicable)

A thorough report of rationale used in determining if the project will be submitted for Plancon. If the project is determined to be submitted for reimbursement, progress on the process must be reviewed.

2. Program conformance analysis

Provide a general review describing how proposed design meets the functional, statistical, and educational requirements of the program. Describe any departures from program or any recommended changes and reasons thereof.

Include the appropriate stage of development for the Owner's Project Requirements (OPR) and Basis of Design (BOD) as required by LEED.

3. Schedule

Provide an update of the project schedule to reflect the completion of scheduled activities and refinement of the remaining design activities as well as construction phase milestone dates. Also, included should be:

- a. remaining dates for design phase submittals.
- b. bid calendar including dates of advertisement, pre-bid meeting, bid opening, and bid award.
- c. completed and scheduled meetings with code and zoning officials. List all required approvals and critical dates.
- d. completed and scheduled meetings with users' groups.
- e. important milestones that must be completed by the district.

4. Project Cost Estimate

Based on the documentation, an update of the project cost budget. Included should be:

- a. construction cost, including site costs
- b. soft costs, including fees for design, consultants and project administration.

The documentation prepared by the architect at the completion of the 30% phase will usually consist of the following.

- A. Site plan showing the relationship between new and existing structures, traffic flow, existing and proposed topography, landscaping features, roads and walks and major utility connects, typically at 1-inch = 20 feet scale. Utilities requirements (type, estimated load, proposed routing and connection locations):

Electric (Normal)	Gas
Water	Storm Water Management
Sanitary	Telecommunications
Fire Protection	

- B. Typical floor plan(s) at 1/16-inch scale. May be single line in this phase.
- C. Plans of special floors or areas at 1/8-inch to provide understanding of the design direction.
- D. Roof plan; 1/16-inch scale.
- E. Elevations. Not fewer than two (2) in schematic form at 1/16-inch or 1/8-inch scale as appropriate.
- F. Diagrammatic sections; 1/8-inch scale.
- G. Equipment and furnishings. Indicate any special equipment that influences design; show other equipment and furnishings as required for "proof-of-scheme."

The following reports are normally prepared as a part of the 30% review:

A. Material/Systems Outline:

1. Structural Systems. Describing proposed materials, foundation types, modules, design loads, and design criteria to be employed.
2. Building Envelope. Describing wall systems, window types, glazing types, provisions for cleaning and thermal characteristics and roof systems. (Waterproofing/weatherproofing requirements.)
3. Principal Interior Finishes. Describing finishes for typical areas, areas subject to heavy use or traffic, toilet areas, and food service areas, and any special finishes; for example, entry lobby, etc.
4. Mechanical Systems. Outline tentative selection of energy heating-cooling systems and control methods, including relationship to existing systems, if appropriate. Provide design data statement (temperature, humidity, etc.), block load data, proposed location of outdoor components.
5. Electrical Systems. Outlining tentative distribution method, typical lighting types and levels, fire protection, emergency and communication systems.
6. Telecommunications. Description of systems and capabilities. Service line location.
7. ADA requirements. State where standards for ADA are being met and any areas where standards have not been complied, and give reasons for noncompliance.

B. Interrelationship Review. Describe provisions for compatibility among structural, mechanical, and electrical systems; size and location of mechanical-electrical equipment spaces.

C. Code Analysis. Providing written statement describing methods proposed to comply with governing codes and regulations, including zoning, occupancy, life safety, fire resistance, fire protection, and structural adequacy.

## **60% REVIEW**

At this review questions or concerns posed from the 30% review must be addressed. Also, updates of the four key aspects (Plancon process, program conformance analysis, schedule, and project cost estimate) must be presented.

Additionally, the following documentation is required: .

- A. Site Development. 1 inch = 20 feet, similar to schematic submittal, plus the following:
  - 1. Entry and exit conditions, on-site roadway and final traffic flow with percent grades.
  - 2. Parking layouts, if applicable.
  - 3. All underground utilities and services.
  - 4. Proposed planting plan showing species, size, quantity and spacing of plant materials.
  - 5. Established elevations.
  - 6. Lighting layouts.
  - 7. Completed sewer planning module.
  - 8. Soil Erosion and Sedimentation Control Plan Draft.
- B. Floors Plans. 1/8-inch scale minimum, including designated room names and numbers, dimensions, door swings, and typical material indications. Tabulate design loads on drawings.
- C. Plans of Special Floors or Areas. Floor plans of special areas at 1/4-inch scale minimum.
- D. Reflected Ceiling Plans.
- E. Roof Plan. 1/8-inch scale, include penthouses, major mechanical equipment, expansion joints, and all projections visible from ground level.

- F. Elevations. 1/8-inch scale minimum for all exterior walls of building; include floor elevations and enlargement of special details or wall configurations.
- G. Sections. 1/8-inch scale minimum; number as required to reasonably illustrate floor relationships, construction thicknesses and profiles, vertical circulation, and special features.
- H. Typical Details. Plans should not be smaller than 1/2-inch scale, including exterior wall sections.
- I. Finish Schedules. Format is intended for construction documents; schedules must show construction document room numbers.
- J. Equipment and Furnishings. Expand schematic design requirements. Include a list on a room number basis, noting both new and existing equipment to be used. With existing equipment, note location and what, if any, modifications to the equipment will be necessary to adapt it to its new location.
- K. Mechanical/Electrical Provisions. Single line drawing to illustrate duct work, principal piping, riser diagrams and single line diagrams, lighting layouts, and other typical systems; provide double line drawings in equipment rooms and restricted areas at scale as required to illustrate adequacy of area and clearances.

The following reports are normally a part of the design phase documentation:

- A. Structural Provisions
  - 1. Design Data
    - a. Design criteria employed
    - b. Live, dead loads
    - c. Confirm system(s)
    - d. Confirm foundation type
    - e. Confirm special provisions for concentrated loads, openings, and equipment loads
    - f. Subsurface waterproofing methods, if applicable

B. Mechanical/Electrical Provisions

1. Confirm systems selections by analysis reflecting initial cost, useful life, rate of return, building construction and configuration, weather conditions, building occupancy, utility costs, and maintenance costs. Make analysis in accordance with the format shown in ASHRAE Guides, "Owning and Operating Cost Data and Summary." (This will be performed only if the district contracts for this additional service).
2. Integrated Systems (when applicable). Describe interrelationships, efficiency of control, and operation restrictions.
3. Energy and Utility Summary. Calculate estimated consumption of electricity, water, steam and gas, and flow capacities of drainage systems; provide breakdowns for major areas' subsystems or equipment loads. (This will be performed only if the district contracts for this additional service).
4. Lighting Fixtures. Provide manufacturer's name, description, illustration and characteristics for typical lighting fixtures, including exterior; designate areas where special fixtures or layouts are contemplated.

C. Code Analysis Review

Review analysis made during schematic design to confirm or supplement previous conclusions and update meeting reports with zoning or building code officials.

D. Acoustical Report

Outline provisions for sound control and attenuation in typical area; describe provision (or Consultant's report) for severe acoustic problems; describe provisions for isolation of sound due to motor-driven equipment, etc.

E. Area Volume Statistics

Check calculations made during schematic design, and tabulate any significant changes.

F. Outline Specifications and Related Documents

Provide brief description of proposed conditions of the contract and technical specifications, following the 50 division format of the "Uniform System for Construction Specifications."

## **90% REVIEW**

At the 90% review all questions and concerns from the 60% review must be addressed. Also, a complete and thorough update of the four key aspects (Plancon process, program conformance analysis, schedule, and project cost estimate) must be presented.

The following are requirements in addition to the items outlined in the 30% and 60% reviews:

### A. Civil and Site Work Drawings

#### 1. Site Survey

Incorporate, but qualify that its inclusion is for bidders' convenience only.

#### 2. Landscaping

Incorporate on the drawing as required schedule of planting materials.

#### 3. Stormwater Management and Underground Drainage

Include invert elevations; show foundations (if any) on drainage drawings. Include profiles, geotechnical criteria, infiltration and/or detention parameters.

### B. Structural Drawings

#### 1. Design Loads

Tabulate on drawings; identify design criteria; avoid duplication of any information or requirements stated on specifications.

#### 2. Protection

Show relationship to adjacent structures and methods of protection.

### C. Architectural Drawings

#### 1. Fire Protection

Identify location and extent of fire-resistive walls and partitions; identify rated door openings on schedules.



2. Elevators

Note characteristics on drawings, including speed, capacity, and electric current requirements (establish capacity allowance as appropriate).

3. Equipment

Show all equipment included in construction contract. Show equipment not on contract when anchorage is required or when advisable to facilitate delivery, location, or adjacent or related construction and the like.

D. Food Service Equipment

1. Base Drawings

Include for equipment other than free-standing with legs or manufactured bases.

2. Rough-in Drawings

Include, showing sizes, characteristics, and locations of mechanical and electrical services.

E. Mechanical Drawings

1. Equipment Rooms

Not less than 1/4-inch scale, showing multiple plan levels, when required, for clarity.

2. Sections

Include for equipment, piping, and duct work in restricted areas.

3. Duct Work

Show double line on plans, sections, and details. Provide one line riser diagrams.

4. Supports

Coordinate hangers, bases, and supports with other drawings.

F. Electrical Drawings

1. Panel Schedules
2. Motor Control Schedules

Include size and type starters, interlock devices, and disconnects.

G. Laboratory Equipment

1. Elevations

Include wall elevations for equipment in typical and special rooms. Include sections for special equipment.

H. Graphics

1. Both interior and exterior.

I. Engineering Calculations

The following reports are normally required at the completion of the 90% review:

A. Confirmation of reports submitted during design development phase as follows:

1. Code analysis review
2. Acoustical report for specialty areas such as music rooms and gymnasiums.
3. Area volume statistics

B. Changes--Since Approval of Design Development

Document any others not included hereinabove.

C. Conformance

Confirm conformance with requirements of City Code Agencies and Public Utilities.

The following specifications and related documents are required:

A. Cover, Title Page, and Table of Contents

Include official project title, Owner and User credits, architect's and consultant's credits, location, date, and official project number(s).

B. "Front End" Document

Appropriate general conditions, general provisions (special conditions) and the "Bidding Documents"

C. Technical Specifications

The architect is responsible for the technical (Division 2, etc.) specifications.

D. "Bidding" Documents

Documents, such as "Invitation to Bid," "Instructions to Bidders," Bid Bond Forms, Performance Bond Forms, Safety Program requirements, Project Schedule information, and other requirements.

At the completion of 90% review the committee will again formulate a written list of questions and concerns. Additionally, it will be determined if a written response is sufficient or a "final committee review" is required.