

**District: City / Town of XXX**  
**School: XXX**  
**Submittal: Design Development**  
**Submittal Date: Date**  
**Review Date: Date**  
**Reviewed by: XXX**

## **MSBA REVIEW COMMENTS:**

The following comments<sup>1</sup> on the Design Development submittal are issued pursuant to a review of the project submittal document dated **Date**, for **renovation/replacement** of **XXX**, and presented as a Design Development submission, as produced by **Designer** and its consultants. Certain supplemental components from the Owner's Project Manager (OPM) – **OPM**, are included. Documents received at MSBA on **Date**.

### **1) Summary Comments:**

- OPM deliverables:
  - Included / not included
- Reconciled construction cost estimate including Designer/OPM comparison chart:
  - Included / not included
- Designer certification of compliance with space summary as agreed upon at Project Scope and Budget agreement, including a list of all variances (if any) by category and by space:
  - Included / not included
- List of proprietary items (if any), associated District affidavit, and certified copy of vote:
  - Included / not included
- Project sign design/specification in compliance with 963 CMR par 2.04 (1) (g)
  - Included / not included
- Designer response to MSBA comments of previous submittal:
  - Received / not received
  - Comments addressed / comment resolution outstanding

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<sup>1</sup> The written comments provided by the MSBA are solely for purposes of determining whether the proposed plans and specifications, and any other design documents submitted for MSBA review, appear consistent with the MSBA's guidelines and requirements and are not for the purpose of determining whether the proposed plans and specifications meet any other legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed plans and specifications and any other design documents submitted for MSBA review meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of construction documents. Each city, town and regional school district shall be solely responsible for ensuring that its plans and specifications comply with all applicable provisions of federal, state, and local law, including, but not limited to, all procurement laws. The MSBA recommends that each city, town and regional school district have its legal counsel review its plans and specifications to ensure that it is in compliance with all provisions of federal, state and local law prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's plans and specifications.

## 2) OPM deliverables :

- Develop project scope, schedule of budget:
  - Prepare independent construction cost estimates
  - Update project budget
  - Update project schedule
    - OPM is required to provide a complete milestone schedule depicting all key tasks with durations. The schedule is to be updated and submitted to MSBA as often as is required to reflect any changes, including any changes to milestone dates, but must be submitted with each design submittal (DD, 60% CD, 90% CD).
    - As one of the milestones, the schedule is to indicate the date for submission to MSBA of the Design Development, and proposed dates for submission of the 60% and 90% Construction Documents submittals. The schedule is to incorporate 21 day required duration for MSBA review of each submission, and a minimum of 14 days for project team incorporation of MSBA review comments as well as all others into the project documents prior to the due date of the next submission or finalizing project documents for bidding. Thirty five days for each submission is the minimum acceptable duration; if the project team believes additional time is required for any or all of the submissions the durations for these activities are to be increased accordingly.
- Coordinate design; make recommendations to the Owner
  - Technical accuracy
  - Efficiency
  - Coordination
  - Constructability
  - Cost effectiveness
- Review designer submissions; make recommendations to Owner
  - Approve submission
  - Approve partially; reject remainder
  - Reject the submission
  - Provide additional supporting information
- Coordinate the commissioning consultants' review
  - Incorporate Cx recommendations

## 3) Designer deliverables :

- Target dates for all filings and permits
  - Confirmation of project registration with CHPS / USGBC
  - Security and visual access requirements;
    - Confirmation that the persons responsible for implementation of the District's emergency procedures, and responding emergency medical, fire protection, and police agency representatives have been consulted

in the planning process and any associated requirements have been included in the project.

- Identification of any other security related items particular to the District and/or the proposed project.
- Verification that the following safety and security related issues have been reviewed and are in accordance with the District's procedures as noted above:
  - Main entrance design – describe District protocol for visitor entry and check-in related to the current design for visitors to remain in the vestibule versus a side sub-vestibule;
  - Classroom lockset hardware - confirm hardware functions are compatible with the District's protocols related to lockdown;
  - Classroom / Instructional spaces visibility - confirm that the inclusion of sidelights at entrance locations is compatible with the District's current standards related to visibility from corridors and whether any related vision control option measures are to be incorporated.
  - Alternative entry locations - confirm project includes site and building signage, as may be required by District's emergency procedures, to identify locations where first responders may more directly reach a person needing medical attention; Knox Boxes; and provisions for building plans to be delivered to local fire and response agencies.
- Information, rezoning and environmental permits
- Design Development drawings and specifications for all disciplines
- Quality Control documents demonstrating:
  - Ceiling clearances
  - Mechanical room and shaft sizes
  - Coordinate specifications and drawings
  - Filed sub-bid work
  - Scheduling
  - Equipment and power
  - Existing and new construction
  - Phasing
- Life Cycle cost analysis for energy and water consuming devices
- Construction cost estimates in Unifomat II, level 3
  - Showing unit rates and quantities; projected to midpoint of construction
- Updated space summary and signed certification that reflects the current design.
- Submit a written summary comparing the project design with the final design program, and confirm that there are not variations. If there are variations, the written summary must address the following:
  - Explanation of deviations within the space summary from the Project Funding Agreement

- The MSBA considers that deviations include changes in the size of a specific space, the total nsf of a program area (e.g. general classrooms, voc tech, dining etc), the location of a space, the surrounding adjacencies of a space and or the intended purpose of the room;
- The submittal must clearly call out deviations to location and surrounding adjacencies through the use of redlines or “clouding”;
- The explanation should clearly identify the basis of the change identifying both architectural and/or programmatic reasons;
- If the basis of the change is programmatic, the submittal should include a red-lined version of the educational plan incorporated in the Project Funding Agreement;
- Regarding DESE approved SPED spaces;
  - If the District wishes to submit a change to its DESE approved submittal, it must a) provide a new submittal utilizing the format of the original submittal requirements and clearly noting any changes through use of clouded floor plans and red-lined narratives and tables; and b) indicate how the project schedule can accommodate a potential resubmittal and approval by DESE.
  - If the District chooses not to change from the DESE approved submittal it should confirm that the spaces are the same or explain when and how the spaces will be returned to the approved size, configuration and location.

#### 4) Drawing Requirements

- Site and utility drawings
  - Existing and proposed contours and locations of the proposed building or addition(s). Show entry level elevation and key exterior grades at perimeter. Indicate all retaining walls. Include benchmarks of site if survey is available.
  - All utilities existing and proposed, indicating location, elevation, composition and size e.g., gas and electric utility providers.
  - Roads, laid out parking areas, walks, recreation areas, terraces and other site improvements.
  - Building locations fixed and referenced from main survey baseline, if available.
  - Plant materials with preliminary schedule.
  - Cuts of benches, light standards
- Building drawings and other graphic and written requirements with floor plans showing: (minimum 1/8" = 1'0")
  - Building perimeter with exterior wall thicknesses and overall dimensions;
  - Structural grid;
  - Plan requirements of mechanical and electrical systems,
  - Building core; elevators, stairs, shafts, public toilets, with dimensions;

- Internal partitions; appropriate thicknesses and dimensions to fix basic organizations; indicate fire rated lines;
  - Door swings;
  - Floor elevations;
  - Built-in furniture and equipment;
  - Furniture layout concept drawings.
- Large scale plans showing key areas e.g. lobby, special spaces. Indicate surface materials. (minimum scale 1/4" = 1'0")
- Roof plans showing;
  - Proposed systems type;
  - Pitch and drainage pattern;
  - Roof drain, gutters and scuppers;
  - Skylights, stair halls through roof, penthouses, major equipment, chimneys.
- Building sections: One transverse and one longitudinal section. Indicate floor to ceiling heights and floor-to-floor heights. Label all spaces;
- Building elevations showing;
  - Full height elevations including roof structures, e.g., mechanical equipment, chimneys, and penthouses;
  - Floor elevations, floor-to-floor height, and overall height related to benchmarks on site plans;
  - All fenestration;
  - Column centerlines
  - Materials indicating major control and expansion joints, and divisions of materials where required;
  - Louver locations;
  - Exterior grades and topographical features in context.
- Full height wall sections for main elevations and at special conditions. Show foundation and perimeter treatment, wall construction including insulation and supporting structure, fenestration and mechanical penetrations, and floor construction.
- Interior elevations: Show at all spaces, e.g. library, lobby, and all typical spaces, e.g. classroom;
- Reflected ceiling plans: Show prototypical structural, fire protection, mechanical and electrical information for classrooms and major spaces, including lighting layouts with ceiling height and material changes;
- Schedules;
  - Finish schedule by room types;
  - Door schedule by room types;
  - Window schedule;
  - Equipment schedules, e.g., food service, instructional media.
- An interior color theory statement discussing proposed paint and material selections and colors for typical and special spaces and why they have been selected and, how these selections relate to exterior materials and colors;

- Structural Concepts;
  - Locations and dates of test boring holes and results of soil investigation, including water levels, allowable solid bearing pressure and bottom grades of footing and slabs.
  - Framing plans: typical floor framing, roof framing, special framing, show framing at major openings and sizes of members.
  - Foundation plan showing sizes and locations of typical components.
  - Column locations.
  - Preliminary details including floor and roof deck, statements as to methods of lateral bracing and how requirements of earthquake code will be met.
  - Details for special and/or incidental structural features, e.g. tunnels, connecting bridges and unique architectural features.
  - Connection to existing buildings at foundation and at key points at existing structure if applicable.
- Fire protection: floor plans indicating wet or dry type systems, hose racks or cabinets and fire department tie-ins. Indicate whether a fire pump will be required and, if so, show location within the building. Show typical sprinkler head layout;
- Plumbing and sanitary systems: floor plans indicating locations of all plumbing fixtures and special features, and approximate location and size of all piping systems and principal items of equipment.
- Heating, Ventilating and Air Conditioning Systems;
  - Heat gain and loss calculations.
  - Show locations and approximate sizes of piping systems, air handling systems and principal items of equipment such as compressors or cooling towers.
  - Indicate space requirements of major equipments and their location in mechanical rooms and fan rooms. Indicate shaft requirements.
- Electrical Systems;
  - Calculations showing total electrical load.
  - All services including those for special purposes shall be located and indicated.
  - Lighting shall be indicated as to type, location and intensities in foot-candles for each special and typical space. Provide fixture cuts of typical lighting fixtures, e.g., classrooms. Provide fixture cuts for special lighting applications.
  - Switchgear and emergency generator.
  - Fire alarm system drawings showing all initiation and signaling devices, control panels, annunciator panels, etc.
  - Security system drawings.
  - Communications drawings showing chases, major equipment locations and any special distribution requirements.

#### **5) Project Manual Requirements:**

- Outline Specifications in CSI Master spec Divisions Including:
  - Site work; clearing, drives, walks, parking areas, fences, excavation, backfill, planting:

- Footings; on earth, rock, piles, caissons, proposed bearing pressures, boring logs:
- Foundation walls; type of concrete, reinforcing, type and extent of waterproofing:
- Footing drains; type, disposal of drainage:
- Exterior walls: superstructure, type, materials, brick type, alternate cladding, back-up materials, dampproofing material and extent, special features.
- Roofs; type, vapor barrier, insulation, flashings, all materials.
- Flashings; general types, all materials, weights, where each type is to be used.
- Sheet metal; gutters, leaders, others uses, except flashing.
- Windows; general types, materials, section weights, sub-frames, finish, glazing, screens.
- Doors, exterior and interior; types and thicknesses.
- Steps, exterior; including platforms and landings' materials.
- Stairs, interior; including platforms, landings, walls, materials and finishes.
- Framing; wood, concrete or metal systems in accordance with general design.
- Partitions; materials, thicknesses, finishes.
- Cabinet and casework; types and materials.
- Food Service Equipment; types and materials.
- Furring; lathing, plastering, materials and locations.
- Insulation thermal; types, thicknesses, methods of application and locations.
- Acoustical treatments; types, thicknesses, methods of application and locations.
- Interior finishes; materials for floors, walls, bases, wainscots, trim, ceilings, ceiling heights.
- Fire protection; standpipe systems, sprinkler systems, fire pumps and accessories.
- Water supply; source; location of main to which connection will be made; type of pipe for service main; load requirements; load factors and pressures.
- Sanitary sewers; sewage disposal system, pipe and other materials.
- Storm sewers; storm drainage disposal system (institution or local facility), pipe and other materials.
- Gas main; material, size, location. Interface with utility company.
- Plumbing; systems such as wastes, vents, hot water, cold water, gas, air, oxygen, vacuum, main source of supply, materials for each, water heaters, pumps, thermal insulation fixture quality, all special features.
- Heating, ventilating and air conditioning; type of heating and refrigeration plants, type and capacity of boilers and cooling equipment, fuel, type of burners, fuel storage, heaters, feed water pumps and heaters, thermal insulation, type of heating medium, supply and return piping, radiation, unit heaters, radiant heating, principal air conditioning equipment types, special features, supply, return and exhaust ductwork.

- Electric work; service connection, location, institution or public utility, overhead or underground, transformers including type and location, types of conduit and wiring, types of fixtures, location of main switchboard, radio, fire alarm, telephone, public address, emergency lighting and wiring, emergency or other generators, special features, including Master TV, information retrieval and/or data processing system.
- Elevators, dumbwaiters and platform lifts; capacities, speed, travel in feet, landings, operation, controls, platform sizes, machine type and location, car and entrance finishes, signals.
- Other built-in equipment, types and materials.
- Special features.

**6) Additional Findings / Comments:**

- **Start comments here:**
  - **Bullet points here**