The Design Development Phase should provide definite design conclusions based on the approved Schematic Design framework and represent approximately 50% of design completion. Where the consultant requires a decision or recommendation to proceed to the Construction Document Phase, adequate supportive and explanatory information should be provided upon which a determination can be made. The submittal should be presented in the Standard Plan and Specification format with additional narrative materials as necessary. Provide written response to owners schematic review comments. Resolve any outstanding issues on schematic design checklist. Designer shall insure all sub-consultant work is coordinated.

Objective: To develop in further detail the approved conceptual design. The design documents should clearly identify the developed civil, architectural, structural, mechanical, electrical, plumbing and fire protection design solutions. All major features and components of the design solution should be documents and included in the updated cost estimate and compound with AFC. Upon approval of the Design Development Package by the owner, the design team will begin execution the final construction design details. The approved Design Development Package constitutes a complete concept and no further changes to the plans, elevations or building systems will be allowed except to comply with construction or code requirements.

Design Development Drawings

CIVIL DRAWINGS

Checked by Consultant

Initial Date A. Site Plans

Provide the following:

1. Building location plan – building tied down dimensionally with pertinent adjacencies, permanent bench mark, street lines, property lines, required setbacks, easements, rights of way, manholes, sewers, hydrants, light standards, interface with survey.

2. Grading and paving plans, include contours, critical spot elevations. (Main level datum elevation)

   a. Include sidewalks, ramps, stairs, driveways, parking areas including layout geometry

   b. Site drainage and retention areas

3. Utility Plans

   a. Identify existing and new utilities to the building (electrical, water, gas, telephone and cable)

   b. Identify sanitary and storm laterals from the building to the mains

   c. Identify site storm sewers, inlets, manholes, etc.

B. Site Sections

Provide the following:

1. Include typical driveway, parking area, sidewalk cross sections.
C. Typical Design Details

Provide typical details the following exterior:

1. Railing, stairs, ramps, walkway paving types and patterns, benches, site lighting, other significant features

ARCHITECTURAL DRAWINGS

A. Code Analysis Plan

Provide the following:

1. Code Footprint

   a. Include all fire rated partitions

2. Code Analysis (Show on drawings)

B. Architectural Floor Plans

Provide the following:

1. Dimensioned structural bay system
2. Internal partitions located, drawn and located and dimensioned
3. All casework and other equipment called out on plans
4. Major mechanical/electrical systems determined and their requirements reflected and indicated on the plans including louvers, areaways and utility entrances
5. Locate all plumbing fixtures
6. All rooms named and numbered
7. Locate exterior and interior doors and windows
8. Locate typical and fire rated partition types
9. All keyed references: match lines, building sections, enlarged plans, etc. keyed notes
10. Finish floor elevations noted
11. Expansion joints indicated
12. Building cores (stairs, elevators, toilets, shafts, etc) drawn to a larger scale (+/- ¼"), dimensioned and keyed to larger plans
13. Plans and elevations of feature areas (lobby, special spaces) drawn to a larger scale (+/- ¼") with all surfaces shown and materials called out and keyed to larger plans
14. Demolition plan, roof plan

C. Reflected Ceiling Plans

Provide a reflected ceiling plan for all finished spaces which includes:

1. Located lighting fixtures, speakers, cameras
2. Soffits/bulkheads, skylights
3. Identify major ceiling materials and their relationship with partitions
4. Identify all areas with exposed structure

D. Building Elevations

Provide the following:

1. Building elevations including roof structures and foundations
2. Identify and locate all exterior windows and doors
3. Identify floor levels, vertical dimensions and overall building heights
4. Column center lines
5. Locate expansion joints and major panel joints
6. Exterior mechanical equipment
7. All materials noted; demarcation of materials shown
8. Detailed elevations at a larger scale (+/- 1/4") as necessary to explain intent (building entrance, special brickwork or masonry, building canopy, etc)
9. Major keyed references: match lines, buildings sections, wall sections

E. Building and Wall Sections

Provide the following:

1. Include major building sections, identify column lines, feature openings and relationships between floors, ceilings, structure and mechanical systems
2. Vertical dimensions including floor to floor and ceiling heights
3. Finished grades around the building
4. Typical wall sections or assembly details

F. Landscaping Plan

Provide the following:

1. Site plan indicating lawn and plantings.
2. Consideration is to be given to the topographic information for drainage.

G. Details

Provide the following:

1. Large scale details of major exterior wall assemblies, (parapets to foundation)
2. Large scale details of major foundation and perimeter treatment
3. Typical window and door details (i.e. head jamb and sill conditions)
4. Typical interior and exterior columns details
5. Key areas shown including stairs, elevators, escalators, loading docks, shafts and other conditions where wall sections reveal the third dimension
6. Major casework elevations and millwork profiles
7. Partition types

H. Interior Elevations

Provide the following:

1. Elevations of significant interior spaces
I. Schedules

Provide the following:

1. Draft interior finish schedule
2. Draft door and frame schedules
3. Draft window and glazing schedule

STRUCTURAL DRAWINGS

A. Structural Plans

B. Structural Sections/Details

MECHANICAL DRAWINGS

A. Floor Plans
DESIGN DEVELOPMENT DOCUMENTS DELIVERABLE LIST

Checked by Consultant

Initial  Date

__ __

10. Show electrical requirements such as panel size, location, voltage and current requirements for mechanical equipment.

B. Sections
Provide the following:

__ __

1. Critical mechanical room cross sections
2. Corridor sections indicating duct clearances

C. Catalog Cuts
Provide the following:

__ __

1. Grills and diffusers
2. Special equipment
3. Controls/Building Management Control Systems (BMCS)

PLUMBING/FIRE PROTECTION DRAWINGS

A. Floor Plans
Provide the following:

__ __

1. Size and locate utility risers, shafts, chases and equipment on architectural plans

B. Detail Plans
Provide the following:

__ __

1. Locate all toilets, urinals, lavatories, mop sinks, floor drains and drinking fountains
2. Locate underslab sanitary and supply lines
3. Locate maintenance hose bibs in toilet rooms and on exterior of building
4. Include roof drainage system (quantity and location of roof drains, internal and external downspouts
5. Coordinate fixture sizes and mounting heights (for special accessibility and age groups)
6. Coordinate plumbing chase and shaft depths with architectural
7. Consider access and replacement requirements with all room layouts
8. Coordinate ceiling plenum space with architectural, fire protection, mechanical, electrical structural
9. Coordinate piping site and flows with existing sprinklers if applicable.
10. Fire Sprinklers: On new construction, make arrangements with the water company to have a hydrant flow test made. Include the flow test report in the Contract Documents.

C. Catalog Cuts
Provide the following:

__ __

1. Plumbing fixtures
2. Sprinkler heads
ELECTRICAL DRAWINGS

A. Floor Plans

Provide the following:

1. Size and locate utility equipment on architectural plans.
2. Major electrical equipment (switch gear, distribution panels, emergency generator, transfer switches, UPS system, etc.) dimensioned and drawn to scale into the space allocated, also include riser diagram or one line diagram.
3. Identify service amperage and voltage requirements
4. Locate size of conduit runs, cable trays, risers, shafts, chases, etc
5. Locate size site electrical: transformers, underground service, entrance details, etc
6. Identify typical and feature lighting fixtures: ceiling and wall types reflective ceiling plan
7. Identify electric and telephone panel room locations
8. Locate electrical devices for typical classroom, offices, special classrooms including power receptacles, computer, telephone, TV, light switches, closed circuit TV, fire alarm, security and intercom devices
9. Locate exit and emergency lighting and fire alarm devices (consider ADA requirements)
10. Consider access and replacement requirements with all utility room layouts
11. Coordinate ceiling plenum space with architectural, plumbing, fire protection, mechanical, structural
12. Update design calculations to include power consuming equipment and load characteristics.
13. Site lighting, locate and identify all lighting fixtures.

B. Catalog Cuts

Provide the following:

1. Light fixtures
2. Fire alarm devices
3. Special equipment
4. Factory installed lighting and voltage surge protection equipment

OTHER REQUIREMENTS

A. Specialty Consultants

All specialty consultants should provide the same level of information which is required for MEP disciplines. Typical specialty consultants include: Lab, security, acoustical, A/V and kitchen consultants

B. Specifications

Provide the following:

1. Draft specification
2. When a product is specified, three manufacturers must be listed as acceptable. Contact the Project Manager if circumstances require a product to be sole sourced.

C. ESTIMATES

Provide the following:

1. Major line items costs for all building components, verify inclusion of all elements by cross-checking against specification for omissions
2. Identify escalation to mid-point of construction
3. Update cost estimate of construction and compare it to the allowable for construction.
4. Estimate construction period, identify any phased work and any long-lead time for special item.
5. Sole source items identified as approved.

D. ENERGY

Provide the following:

1. Updated Energy Report

E. GENERAL

Provide the following:

1. As documents develop, confer with regulatory agencies such as:
   a. Fire marshal (state and local)
   b. Department of Health
   c. Department of Education
   d. Local zoning commission
   e. Local planning commission
   f. Other

2. Identify all documents with project number and date.

3. Review the building design program, scope of work and verify compliance.

4. The mechanical and electrical engineers:
   a. Contact utility companies and public authorities for all services and initiate approval process as needed for connection to their systems.
   b. Investigate and report on their review of all applicable local, public and utility regulations;
   c. Notify the Architect of space and location requirements for systems
   d. Prepare estimates of probable operating costs with recommendations for implementation
DESIGN DEVELOPMENT DOCUMENTS DELIVERABLE LIST

Checked by Consultant

Initial Date

A. SUBMITTALS FOR REVIEW

___ ___ 1. 4 complete sets of drawings and specifications, plus extras required as discussed at the Pre-Proposal meeting.

___ ___ 2. CADD Deliverables for review for adherence to CADD Deliverable Guidelines if not previously submitted in the Schematic Design Phase