DESIGN DEVELOPMENT DOCUMENTS DELIVERABLE LIST

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 up-dated 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

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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.

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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 (+/ - ¼") 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

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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.

Provide the following:

___ ___ 1. Foundation plan including interior and perimeter foundations, footings, piles, caissons, wall beams and grade beams as needed.
___ ___ 2. Framing plans for all floors and roof including major member sizes noted or scheduled, typical and maximum column sizes
___ ___ 3. Locate columns, beams, purlins, joists, etc.

C. Structural Sections/Details
D.

Provide the following:

___ ___ 1. Location of in-floor electrical system
___ ___ 2. Major penetrations (i.e. slab openings, pits, tunnels and ramps) located on drawings
___ ___ 3. Expansion joints located
___ ___ 4. Typical edge of slab details for cladding attachment
___ ___ 5. Special conditions noted (shoring, underpinning, etc.)
___ ___ 6. Provide wind, seismic, dead and live loads design information.
___ ___ 7. Footing, beam, column and connection details.
___ ___ 8. Updated building elevations.

MECHANICAL DRAWINGS

A. Floor Plans

Provide the following:

___ ___ 1. Size and locate utility risers, shafts, chases and equipment coordinated with architectural plans
___ ___ 2. Heating and cooling load criteria for each space and major duct or pipe runs sized to interface with structural and architectural building components.
___ ___ 3. Mechanical room equipment layouts are shown
___ ___ 4. Locate major equipment such as boilers, cooling towers, air handling units, heat pumps, exhaust fans, unit heaters, perimeter fin tubes, etc.
___ ___ 5. Locate intake and exhaust louvers
___ ___ 6. Indicate typical layouts of all ceiling devices
___ ___ 7. Consider access and replacement requirements with all equipment room layouts
___ ___ 8. Coordinate ceiling plenum space with architectural, plumbing, fire protection, electrical, structural
___ ___ 9. Air and water flow diagrams showing CFM and GPM respectively.

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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

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___ ___ 3. Special Equipment
___ ___ 4. Fire suppression system

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

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Initial Date

___ ___ 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

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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