Design Consultant GUIDE

City of New York
Department of Design
and Construction

August, 2003

Appendix G

David J. Burney, AIA
Commissioner
Anne Papageorge, RLA
First Deputy Commissioner

Division of Structures
Louie Rueda, RA
Deputy Commissioner
Charles Cellura, RA
First Assistant Commissioner
Margot Woolley, AIA
Assistant Commissioner

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DDC

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A THE DIVISION OF STRUCTURES

The NYC Department of Design and Construction provides complete building design and construction management services for a broad range of municipal agencies. Building types include cultural institutions, libraries, transportation facilities, firehouses, health clinics, senior centers, child care centers, courts, correctional facilities, police precincts, emergency medical stations and schools. The Division of Structures administers this program through contracts with architects and engineers, landscape architects, contractors and construction management firms. The task of the Division of Structures of the Department of Design and Construction is to efficiently fulfill the capital construction needs of its Client Agencies.

The Client Agencies include the Department of Cultural Affairs, the Department of Parks and Recreation, the Brooklyn Public Library, the New York Public Library, the Queens Borough Public Library, the Department of Transportation, the Taxi and Limousine Commission, the Department of Environmental Protection, the Fire Department, Emergency Medical Services, the Department of Health, the Office of the Chief Medical Examiner, the Department for the Aging, the Administration for Children's Services, the Agency for Childhood Development, the Department of Citywide Administrative Services, the Department of Homeless Services, the Department of Consumer Affairs, the Human Resources Administration, the Office of Court Administration, the Department of Juvenile Justice, the Department of Correction, the Police Department, Off-Track Betting, the Department of Consumer Affairs and the NYC Board of Education.

The goals and interests of the various Client Agencies are directly served through Program Units dedicated to these agencies and the capital projects that they undertake. The Program Units comprise the principal organizational framework of the Structures Division, and are supported by the technical, budget and contract processing resources of other units of the Department of Design and Construction. The Program Units are directly responsible for managing projects from the initial program requests by the Client Agency through construction, completion and acceptance for occupancy. Each Program Unit is headed by a Program Director whose primary responsibilities are to guide and oversee the implementation of a Client Agency's capital construction program. Project Directors and Project Managers in the Program Units lead individual projects for the project duration. They are supported by Project Teams, which include members from all technical disciplines appropriate to the project.

Technical members of the project team from the Structures Division Architecture & Engineering Units provide specific services on an as-needed basis. Specialists include architects, engineers, landscape architects, urban planners, preservationists, estimators permits and approvals specialists, and building condition surveyors who participate in projects at the request of the Program Units. Tasks include project scoping and review, budgeting, cost estimating and pre-award analysis prior to construction bid disposition. The coordination of technical support is assured through designation of a Team Leader from the Architecture & Engineering Units, who works closely with the Project Manager during the course of the project.

B THE PURPOSE OF THIS GUIDE

The Consultant's Contract consists of three documents: the Agreement, the Specific Requirements or Task Order and the Design Consultants Guide. The Agreement, which the Consultant signs, and the Specific Requirements or Task Order define contractual responsibilities and describe the specific nature of the work required for the particular project or requirement contract. The Design Consultants Guide supplements the Agreement and the Specific Requirements or Task Order. It describes the design criteria of the agency, the services and deliverables expected, and the approvals and procedures necessary to complete design projects at the Department of Design and Construction.

Together, all three documents comprise the Contract. Should there be any conflict among these documents, the following order of priority shall prevail:

1. **Agreement**

2. **Specific Requirements or Task Order, including the Scope of Work**

3. **Design Consultants Guide**

Given the wide variety of project types undertaken by the Department of Design and Construction in support of its Client Agencies, standard specifications are not possible. This Design Consultants Guide, however, serves to announce qualitative expectations, and to describe generic requirements that pertain to most projects. Checklists of services and deliverables are intended to help both the Consultant and the agency staff to understand performance expectations and to evaluate completion of tasks.

Many design projects of the Department of Design and Construction are initiated through Requirement Contracts for design services. The Specific Requirements, which accompany the Requirement Contract Request for Proposals, are necessarily generic since projects to be undertaken are not known at contract initiation. For these projects, the Task Order and the negotiated Scope of Work shall be considered to be an elaboration of the Contract's Specific Requirements.

I. DESIGN CRITERIA

1. DESIGN CRITERIA

A DESIGN EXCELLENCE

In contracting for design services, DDC seeks demonstrated design excellence, together with the management skills necessary to complete the work within schedule and budget. Commitment to design quality is characterized by:

1. Intent

The design of public projects must be guided by a civic consciousness and social responsibility in order to provide dignified spaces that exemplify accessible municipal government and inspire pride in the City.

2. Clarity

The design must reflect a clear understanding of the Client Agencies facility operations, maintenance practices and project goals.

3. Value

Public works design requires a cost effective design approach incorporating life-cycle analysis in the selection of materials and systems.

4. Innovation

A balance must be achieved between the desire for innovative design and the realities of traditional operating and maintenance practices. Durability, ease of maintenance and material innovation are encouraged.

5. Safety

Life safety is the highest design goal for public buildings. Layout, materials, systems and processes shall be selected or specified to go beyond code compliance.

6. Constructability

The completeness, accuracy and integrity of contract documents must be assured by a thorough constructability quality assurance program. Documents must be comprehensive, clearly detailed and well-coordinated across trades.

7. Extra Effort

The Consultant should go beyond basic satisfaction of contract requirements to render a greater service as facilitator, mediator and interpreter.

8. High Performance

High performance features in capital projects add value to the City's assets while helping to protect citizen's health and environment.

9. Universal Design

DDC is committed to supporting the principles of Universal Design in all projects. This means surpassing the minimum considerations of the ADA law to provide a truly accessible environment.

10. Improvement

DDC seeks to learn and improve on completed construction projects. The Consultant team is expected to participate in any post occupancy evaluation

B ARCHITECTURAL DESIGN CRITERIA

Architectural design shall be performed by an Architect registered in the State of New York. The services of specialized Subconsultants shall be made available when required by the nature of the work.

1. Architectural Quality

The Department of Design and Construction seeks the highest quality of design on every project. The architectural design shall become definitive through exploration of multiple schemes and consideration of existing conditions. Successful designs transcend minimum utilitarian requirements.

2. Urban Design

The Consultant shall consider such factors as siting, massing and the relation to adjacent buildings and space. Other elements to be addressed include typical street and block layout, topography, history, and buildings or open spaces of urban significance. All designs shall, where applicable, reflect previously approved master plans.

3. Site Design

The Consultant shall analyze programmed site issues, pedestrian and vehicular circulation, adjacent off-site conditions, existing site conditions, as well as zoning regulations, community needs and environmental considerations. The Consultant shall take into consideration subsurface conditions based on site visits, borings, probes and surveys.

- **Borings and Probes**
  At the Pre-Preliminary or Schematic Design stage a borings and probes program shall be conducted to identify unsatisfactory subsurface materials that will have to be removed to insure stable sub-grade conditions. In all cases buried or abandoned foundations must be removed to an elevation at least four feet below finished grade. The Consultant must refer to the Structural Engineering Criteria section in this Chapter.
- **Footings and Foundations**
  The Consultant must refer to the Structural Engineering Criteria Section in this Chapter.
- **Invasive Plant Species, Pathogens, and Pests**
  Site design and site construction for DDC projects must conform to all current regulations regarding invasive plant species, pathogens and pests, including regulations for the Asian Longhorned Beetle (ALB). The Consultant must determine whether the project site is inside the current ALB quarantine areas, per the NY State Department of Agriculture and Markets (NYSDAM). Updates are available from the NYC Department of Parks and Recreation at (718) 699-6724, or at http://nyc.gov.parks or NYSDAM at (516) 288-1751.
- **Historic and Landmark Sites**
  Historic and designated landmark sites will require research on site use, design and materials. Special probes may be required. The requirements for landmark sites will be as indicated in the Specific Requirements or Task Order. Review by the Landmarks Preservation Commission will be required for designated landmarks.

4. High Performance

In all projects high performance objectives should be adopted as schedule and budget allow. For selected projects the Consultant shall develop and implement a high performance plan consistent with DDC High Performance Building Guidelines.

5. Exterior Materials and Cladding

The Consultant shall consider adjacent buildings and shall seek materials that are cost effective, durable and easily maintained. For renovations and additions, the quality of the new exterior

materials shall be of a quality equal to or better than existing material. The Consultant shall also refer to the Structural Engineering Criteria in this Chapter.

6. Roofing

The Consultant shall specify a roofing system with a binding guarantee the duration of which is acceptable to DDC. Roofs will be light colored with .65 reflectance or better in order to reduce heat gain. The Consultant should consider planted roofs where appropriate. For further information on light-colored and planted roofs, contact greeninfo@ddc.nyc.gov. Roof design shall incorporate planning for locations of future photovoltaic applications where appropriate.

7. Entry

The Consultant is encouraged to integrate required security doors, gates and lighting into the design of entries, and to balance these needs with the need for public facilities to appear inviting. Unsecured recessed entries are generally not acceptable. To improve air quality and reduce cleaning costs, recessed walk-off mats full-width at main building entrances are strongly recommended.

- **Door Hardware**
  Door hardware shall meet requirements for durability and accessibility. Front door hinges shall be heavy duty, non-ferrous, ball bearing hinges with the least projection from the frame. Pivot hinges are unacceptable. Door closers for front doors shall be adjustable to comply with criteria for opening force and delayed-action closing, and shall be hydraulic, slim-profile, and located overhead and inside of entry doors.
- **Accessibility**
  The Consultant is responsible for complying with current standards for accessibility, including local requirements. Consultants are asked to design for the spirit of Universal Design principles, surpassing the minimum requirements of the ADA law.

8. Circulation

Provision for the movement of people and vehicles should be as clear as possible to minimize orientation signage.

9. Security

- **Security Plan**
  The Consultant shall create a security plan for the building to be approved by DDC.
- **Graffiti**
  Client Agencies may require sealants to protect against graffiti. When specifying sealants, the Consultant shall evaluate the risks of long-term damage to materials, particularly masonry on historic structures and landmarks. Knowledge of prior coatings on the building is required, as are material samples with and without proposed sealants. Only non-toxic sealants shall be specified.
- **Window Guards**
  Client Agencies may require the use of security screens on the exterior of windows to guard against window breakage and break-ins. The Consultant is encouraged to explore an improved aesthetic for these applications through new materials, new technologies and new strategies to meet the Client Agency's need for window security.
- **Blast Resistance**
  Blast resistance and higher than normal security measures are of particular importance for certain DDC projects. These may include courthouses, police precincts and structures providing emergency services. Detailed programmatic directives will be addressed for such projects in the Specific Requirements or Task Order.

- **Roof Security**
  On low buildings HVAC equipment enclosures shall be designed to be vandal-proof and aesthetically pleasing. While it is imperative to protect roof equipment from vandalism, the use of extreme security measures, such as razor ribbon or barbed wire, will not be permitted except in detention and correctional facilities.

10. Insulation

Spray-in cellulose or cementitious foamed-in-place products are encouraged to reduce air and thermal leakage in walls as an alternative to fiberglass batts. To maintain air quality, fiberglass insulation shall never be used within air plenums or in airshafts. For further information on spray-in products, contact greeninfo@ddc.nyc.gov.

11. Daylight

Glare-free or controlled daylight should be maximized in all occupied spaces. Controlled daylight improves the indoor environment and with lighting controls, reduces energy costs. The Consultant is expected to use appropriate low-e coatings for increased energy efficiency in insulating glass for windows and skylights. Solid glass block with reinforced joints is recommended where vision glass is not necessary.

- **Windows**
  Operable windows are desirable Limitations in operating budget for glass replacement shall be considered on sizing windows and in glass selection.
- **Skylights**
  Consider secure skylights when context precludes abundant exterior-wall glazing.

12. Interior Materials

For additions and renovations, the quality of new materials shall be equal to or better than those in place. Finish materials shall not adversely affect the health of workers or occupants. Health considerations shall extend to the material's production, off-gassing during installation, and environmental pollution engendered by the process of disposal. Projects shall incorporate the specification language referred to in "Chapter IX, Section F" in this Guide.

- **Drywall**
  Drywall located within reach of the public must be reinforced and protected. When a design calls for exposed drywall, use of wainscoting, covering, or impact-resistant drywall is recommended. In humid areas, especially below grade, drywall is discouraged because of potential fungus growth. Institutional-quality glazed unit masonry is preferred in areas subject to heavy traffic or potential abuse.
- **Flooring**
  When budgetary and maintenance conditions allow, flooring from renewable resources such as linoleum, rubber, clay or cork, and materials with high recycled content are encouraged. Vinyl composition tile (VCT) is discouraged as a health and environmental hazard. Information on other materials is available upon request from greeninfo@ddc.nyc.gov.
- **Carpeting**
  For environmental and maintenance reasons carpeting is not recommended. Alternative flooring should be considered, and in cases in which carpet must be used, carpet tile is preferred.
- **Wood**
  The Consultant shall investigate the availability of products meeting the criteria of the Forest Stewardship Council for certified wood and use these products when feasible. CCA (Copper Chromium Arsenate) treated wood shall not be used. For specification requirements of alternative products see "Chapter IX, Section F" in this Guide.

13. Graphic Design

The Consultant shall prepare clear graphics for room signage, maintenance, egress and location, in the absence of a graphic design package determined by the Client Agency.

14. Waste Prevention Design Criteria

DDC's implementation of waste prevention takes two basic forms. The first addresses construction and demolition (C&D), and the second calls for materials with a high recycled content.

- **C&D Waste**

  For efficient recycling of construction and demolition waste, the Consultant shall prepare a C&D Waste Specification including a detailed waste management plan. The specification and plan shall be based on the samples referenced in "Chapter IX, Section F" of this Guide.

- **Recycled Content**

  DDC requires that certain construction materials conform to the minimum percentages of recycled content referenced in "Chapter IX, Section F" of this Guide. For the following materials, the project shall incorporate specification language from "Chapter IX, Section F."

  - **Athletic and Recreational Surfaces**
  - **Plastic and Wood/Plastic Composite Lumber**
  - **Fiberglass Insulation**
  - **Sprayed-on Fireproofing**
  - **Gypsum Wallboard**
  - **Ceramic Tile**
  - **Acoustical Panel Ceilings**
  - **Carpet Tile**
  - **Plastic Toilet Compartments and Related Products**
  - **Fly Ash in Concrete**

    When a denser or impermeable concrete is required, such as in basement walls and decks of parking garages, the Consultant shall use fly ash as an admixture. For parking garages the fly ash should be used in conjunction with silica fume. Use of fly ash is encouraged in all other concrete with the exception of cold weather concrete and early strength concrete.

15. Coordination

The Consultant's design shall coordinate the work of the disciplines necessary to complete the project, as well as the suggestions of the Client Agency, DDC Project Manager and Team Leader. In general, DDC projects are organized by trade in compliance with the Wick's Law. Consequent coordination of documentation around separate prime contractors for General Construction, HVAC/Fire Protection, Electrical and Plumbing is of special importance.

16. Constructability Review

Economy, availability, efficiency, clarity, accuracy and coordination in documents at 100% final design will be confirmed on jobs with a construction cost over $250,000 by the Consultant engaging a Construction Manager (CM) to perform a Constructability review of all documents. The CM will be a subcontractor to the Consultant and the review will be delivered directly to DDC and the Consultant. The Consultant has responsibilities in the Schematic and Final Design Phases regarding Constructability Review.

17. Regulatory Agencies

The Consultant is responsible for obtaining all design approvals from regulatory agencies, commissions and utility companies.

C LANDSCAPE ARCHITECTURE AND SITE DESIGN CRITERIA

Landscape design shall be performed by a Landscape Architect registered in the State of New York.

1. Landscape Conditions

The Consultant's work shall demonstrate an analysis of the functional relationships of programmed site issues, pedestrian and vehicular circulation, adjacent off-site uses and conditions, existing site amenities and constraints, environmental considerations, and subsurface conditions based on site visits, borings, probes and surveys.

- **Plant Selection**
  Plants shall be selected based on the conditions of the site such as soil characteristics, moisture, temperature extremes, acidity, wind and light as well as their resistance to serving as a host for the Asian Longhorn Beetle. The use of native plant material is encouraged.
- **Parks Department Review**
  When the Parks Department has jurisdiction, the landscape design of DDC Structures Division projects must be reviewed and approved by the NYC Department of Parks and Recreation, unless otherwise directed by the DDC Project Manager.

2. Sidewalks and Roadways

Projects shall generally provide for either new or repaired street sidewalks, curbs and roadway pavements. The Consultant is advised to confirm with the Building Department at an early stage whether a Builders Pavement Plan will be required. Decorative paving may be incorporated into landscape plans and entry walkways.

- **Accessibility**
  DDC seeks design that address the spirit of Universal Design and that surpass minimum requirements of the ADA laws.
- **Parking**
  All parking lots shall be paved unless otherwise requested in the Specific Requirements or Task Order. Porous pavement and light colored pavements are desirable when budget and site conditions allow. For sources for and further information on porous and light-colored pavement, contact: greeninfo@ddc.nyc.gov. Tree plantings and landscape treatments are encouraged.

3. Plantings

Plans may include lawns, trees, shrubs, ground covers, climbing plants and seasonal plantings. Mature plants are recommended. Plantings shall be maximized as an aid to environmental quality, and to serve in the effort to contain and eradicate damaging pests and pathogens, including the Asian Longhorn Beetle.

- **Street Trees**
  Projects shall provide for new or replacement street trees. Approval for street trees is required from NYCDPR and from DDC. Appropriate tree pits and grates are required.
- **Maintenance Manual**
  For substantial planting designs, a written maintenance manual and schedule shall be prepared by the Consultant for the Client Agency users and submitted at the completion of construction.
- **Invasive Plant Species, Pathogens, and Pests**
  Site design and site construction must conform to all regulations regarding control of invasive plant species, pathogens, and pests, including regulations for the Asian Longhorned Beetle (ALB). For the current list of permitted, prohibited and restricted plant species, contact the New York City Department of Parks and Recreation, Central Forestry and Horticulture Division at http://nyc.gov/parks.

4. Drainage

All surface storm water runoff shall be collected on site, in an underground drainage system. Area grading shall provide for drainage away from buildings. Reduce runoff by minimizing paved and other impervious surfaces. Where project conditions allow, porous pavement should be considered. For sources of, and more information on porous pavement, contact: greeninfo@ddc.nyc.gov.

5. Site Work

Site furnishings may include benches, tree grates and guards, railings, bicycle racks, fences, gates, waste bins, light fixtures, signage, kiosks, art work, trellis works and play equipment. Site metal elements shall generally be solid rather than tubular.

- **Fences, Walls and Stairs**
  The design of site fencing should be appropriate to the public building and the surrounding context. Tube stock, chain link and razor wire are not generally acceptable. Generically acceptable fencing includes solid steel pickets, ¾" x ¾" minimum section bar-stock at five inches on center, six feet high. For historic buildings, restoration or replication of original fencing and gates should be considered.
- **Flagpoles**
  The display of the American flag and the flag of the City of New York is encouraged. Attention should be paid to requirements for proper display of the flags, including illumination.
- **Playgrounds**
  Playground and resilient play surfacing design shall meet the requirements and guidelines of the Client Agency, the United States Consumer Products Safety Commission (CPSC), ASTM F1487 and the New York City Building Code. Safe fall zones shall be provided. Playground design shall comply with accessibility requirements.
- **Security**
  Site security features and keyed systems shall be provided when indicated by DDC.
- **Indoor/Outdoor Bicycle Parking**
  Secure bicycle parking for 5% of a building's occupants shall be provided. This parking shall be in view of building security personnel.

6. Irrigation

When required by the Specific Requirements or Task Order, irrigation shall be provided for maintenance, cleaning and watering of plantings. Hose bibs shall be provided at spacing that allows a one hundred feet long hose to reach all parts of the site.

7. Fountains and Pools

When proposing decorative fountains and pools, the Consultant shall identify the required maintenance, water consumption, shut down and winter season issues.

8. Site Lighting

The Consultant shall provide for lighting and outdoor electrical outlet systems, as required. Some projects require building accent illumination. Provide fixture lamping, color and durability information and catalogue cuts for selection when specifying site lighting. Neutral white illumination is preferred. Consider photovoltaic site lighting in lieu of hard-wired where cost-effective.

9. Recycled Materials

The use of recycled materials is encouraged where practical. Where feasible, recycle demolished and removed material, salvage existing site topsoil, and rescue removed plants.

10. Ease of Maintenance

Sites shall be as maintenance-free as possible.

D STRUCTURAL ENGINEERING DESIGN CRITERIA

Consulting work for building superstructures, foundations, site structures, facade and masonry repairs, building inspection, equipment attachments and miscellaneous architectural work shall be designed by a Structural Engineer licensed in the State of New York. The services of a geo-technical consultant shall be made available when required by the nature of the work.

The work shall be in accordance with the latest NYC Building Code together with all currently approved local laws. Steel and concrete design shall be based on the latest edition of the AISC and ACI Codes. New York City design load criteria shall be supplemented by ASCE 7-95: *Minimum Design Loads for Buildings and other Structures,* including Appendices A and B. For descriptions and analysis of existing conditions of buildings, use the standard language provided in the ASCE 11-90 *Guidelines for Structural Condition Assessment of Existing Buildings.*

1. General Criteria

- **Structural Integrity**
  Both foundation and superstructure systems shall be designed to meet all structural integrity, serviceability and appearance criteria as defined by building codes or shall surpass them if required by the Department of Design and Construction. Serviceability criteria include floor vibrations, deflections, floor-to-floor drift and water tightness. The structural design shall provide for crack control, and resistance to corrosion or to other aging factors. The design shall eliminate detrimental effects of any anticipated settlement.
- **Coordination**
  The Structural Engineer shall coordinate work with that of all other Consultants to accurately show on the drawings all major openings through structural walls, roofs and floors with the necessary dimensions and framing. No openings shall be determined in the field with the exception of minor openings drilled by the respective Contractor.
- **Economy**
  While meeting all strength and serviceability criteria, the design is expected to minimize use of material and be economical.
- **Seismic Design**
  The design shall meet the latest code provisions for earthquake for all specialties, including those with electrical and mechanical equipment. When required, the Consultant shall also perform earthquake design according to the latest requirements of the Uniform Building Code. Special consideration shall be given to structures for police, fire, and emergency medical services. Seismic retrofit design shall be in accordance with NEHRP guidelines (FEMA 273).
  Parapets that are entirely rebuilt must include all the reinforcement and anchorage required by the seismic code. Any complete floor-to-floor reconstruction of an exterior wall must include all the reinforcement and anchorage required by the seismic code.
- **Fire Protection**
  The Consultant and the Structural Engineer are responsible for proper fire protection of all materials specified in the structural design.
- **Reducing Uncertainty**
  The Structural Engineer shall request borings, probes and other exploratory studies as needed for a safe design and a construction operation with minimal uncertainties.
- **Construction Tolerances**
  The Contract Documents shall indicate specific tolerances for all structural materials used in the project. The tolerances shall be in accordance with ACI 117, AISC Code of Standard Practice and other national standards.

- **Other Codes**
  At the direction of the Department of Design and Construction, the requirements of the NYC Building Code may be supplemented by more stringent provisions of the latest editions of the Uniform Building Code, AASHTO and NYC or NYS DOT.
- **Calculations**
  Calculations are required. Load and Resistance Factor Design (LRFD) is the preferred method. For new buildings three stories or higher LRFD methods are required.

2. Foundation Design

- **Foundation Type**
  The Consultant shall evaluate the boring data to determine the most suitable and economical type of foundation. This type shall be properly designed, detailed and specified on all structural drawings and specifications.
- **Geotechnical Report**
  When necessary, a geotechnical consultant shall be retained to prepare a report with recommendations for the foundation including instruction for earthquake design. In this geotechnical report the potential for liquefaction and other data to be used in earthquake design shall be identified. The geotechnical report shall be made available at the preliminary stage of the design.
- **Need for Underpinning**
  The Consultant shall evaluate the site where adjacent structures are located, and shall prepare a foundation design that eliminates or minimizes underpinning.
  - **Underpinning Details**
    The Cons**u**ltant shall provide developed site-specific details for the underpinning of adjacent structures on the Contract Drawings. The Consultant shall review and approve all underpinning details needed and comply with the New York City Building Code.
  - **Extent of Underpinning**
    The extent of all underpinning shall be clearly noted on the drawings. Underpinning shall be a Controlled Inspection item.
  - **Conditions**
    The drawings shall contain a section, to scale, of the underpinning work to be performed. The section shall provide a clear illustration to the Contractor as to the conditions for underpinning. Executable instructions to the Contractor shall be provided, including, but not limited to, tolerances, maximum depth for stepping, shoring and site safety.
- **Ground Water**
  The Consultant shall evaluate the boring data to determine ground water conditions. The boring data shall contain sufficient water level readings to provide comprehensive information on site conditions. If waterproofing is recommended by the Consultant, all pertinent waterproofing details shall be shown on structural drawings and stated in the specifications. Guarantee and testing methods for waterproofing shall be indicated.
- **Settlement**
  Adequate foundation support shall be designed to prevent any settlement for all site structures and utility lines where such settlement could have detrimental effects on facility operations, health and safety.
- **Unsuitable Soils**
  Where soils are unsuitable for supporting ground floor slab on grade, such floor systems shall be structurally framed and supported on foundations or compacted controlled fill.

3. **Piles**
   - **Consolidating Soil**
     Piles shall be designed for any negative skin friction for actively consolidating soil.
   - **Pile Type**
     New types of piles, not mentioned in the NYC Building Code, shall be specified only after appropriate design analysis is performed and approval from the NYC Building Department is obtained.

4. **Loads**
   The structural design drawings shall indicate clearly the live loads and equipment loads for which each floor area is designed. They shall also indicate such stress information as may be required for the proper development of all members and for the detailing of connections. Total cumulative loads at the base of each column shall be indicated on drawings.

5. **Exterior Cladding and Masonry**
   The Structural Engineer shall design and advise the Architect on the location of joints and anchorage of cladding. The cladding shall accommodate drift and other movement of the base structures. The Consultant and the Structural Engineer are responsible for the strength and code compliance of all masonry elements, including brick, block, stone and mortar. The Engineer shall advise the Architect on the ASCE wind requirements for glazing and roofing design and specifications. Attachment and reinforcement of all masonry areas, especially parapets, shall be given the most diligent professional attention. Special attention shall be given to landmarks and landmark quality buildings.

6. **Concrete**
   - **Concrete Strength**
     Normal strength concrete shall be 4000 psi. All concrete exposed to the weather or soil shall be air entrained.
   - **Durability**
     Where concrete is used, the specifications shall follow, at a minimum, instructions of the latest American Concrete Institute publication on durability of concrete.
   - **Concrete Specification**
     The concrete specification shall indicate the optimal level for slump, water, cement and admixtures.
   - **Reinforcement**
     Use epoxy coated reinforcing bars in all concrete subject to water and chloride penetration, such as in garages and firehouse slabs.
   - **Testing**
     The Structural Engineer shall be capable of interpreting the tests and statistical data on materials specified in the structural design.
   - **Joints**
     Provide joints and reinforcement for shrinkage and temperature crack control in all concrete construction, and specifically for slabs on grade.
   - **Material Properties**
     For demonstration High Performance Buildings or buildings with landmark status the Structural Engineer shall advise the Consultant as to the adequacy and particular properties of structural materials to be used.
   - **Slab on Grade**
     The Consultant shall design, detail and adequately specify all new slabs on grade to minimize or eliminate cracking and curling. At a minimum the Consultant shall meet the requirements of ACI360R.

- **Fly-ash Concrete**
  Use fly-ash concrete in accordance with "Chapter IX, Section F" of this Guide.

7. Steel

- **Connection Calculations**
  Drawings shall have sufficient information for the calculation and preparation of shop drawings for steel connections.
- **Weldability**
  The Structural Engineer shall require weldability tests for all existing steel that might have been fabricated prior to 1920.

8. Probes

For information pertaining to probes and subsurface conditions, please refer to Chapter I, Article J. below. The Consultant must monitor the execution of probes.

9. Structural Condition Rating

All structural inspection reports, including those pertaining to building façades, shall use a rating system to classify the results of the inspection. The rating system definitions shall be indicated in each report. The first two categories of any such rating system shall use the following definitions:

- **Hazardous Condition (Rating 1)**
  All conditions deemed to present an imminent danger to life and safety of the public or an imminent danger of blocking emergency rescue operations. Such conditions require immediate protective action and shall be communicated without delay to an Assistant Commissioner at the Department of Design and Construction.
- **Emergency Condition (Rating 2)**
  All conditions deemed to become hazardous or induce hazardous conditions in the six months following the inspection if no action is taken.
- **Other Conditions and Definitions**
  Further rating definitions shall be established in agreement with the scope of each project. When performing building inspections the conditions of windows, railings, fences and pavements shall be included in the scope of work.

10. Anchoring Systems

All designs requiring anchoring systems in existing construction shall specify manufacturer, type, size, depth of embedding and load to be attained. Where the Consultant has doubts about the capacity of specified inserts, instructions for inspection during installation and field testing shall be provided. Anchors exposed to weather should be protected against corrosion.

11. Demolition

The Structural Engineer shall prepare and review demolition plans and insure that the proposed work is feasible. The Consultant shall indicate phasing of demolition and prepare a list of required Controlled Inspections in accordance with the New York City Building Code.

12. Tenant Safety Plans

For all work in existing structures that will continue to be occupied during construction, the Consultant shall prepare a tenant safety plan for approval by the Department of Design and Construction. This plan will serve as the basis for Controlled Inspections.

13. Temporary Structures

The engineer is responsible for reviewing the contractor's shop drawing plans for the installation of temporary structures or equipment.

E PLUMBING DESIGN CRITERIA

Plumbing systems and equipment shall be designed and engineered by a Plumbing Engineer licensed in the State of New York and shall comply with the NYC Building Code.

1. Sanitary and Storm Drainage Systems

The Consultant shall design separate sanitary and storm drainage systems, and determine availability of public utilities. Each system shall be designed to connect to its respective street system. Design and specify duplex sewage ejectors for those fixtures that cannot drain by gravity. Design storm water detention or retention.

2. Water Systems

Design potable cold and hot water systems and their accessories in compliance with Regulatory Agency requirements.

3. Connections, Fixtures, Accessories, Piping and Piping Accessories

Design and specify connections, fixtures and accessories, coordinating all toilet room accessories with Architect. Specify piping and piping accessories.

4. Sprinkler Service Line and Standpipe Systems

Design and specify fire standpipe in accordance with the hydrant flow test report. Provide water service up to and including the detector check valve for sprinkler systems and combined sprinkler/standpipe systems. Design all other fire suppression systems in accordance with the New York City Building Code.

5. Facilities during Construction

Provide for temporary water supply and sanitary facilities during construction.

6. Gas Supply

Design and specify a gas supply system. Determine street pressure availability and specify gas boosters in conjunction with the Utility Company, if necessary.

7. Coordination

Coordinate with other disciplines to avoid conflict and inappropriate interferences with other utilities, especially electrical services. Provide for electrical equipment protection from plumbing systems.

8. Riser Diagrams

Show water and drainage riser diagram indicating elevations in feet above mean high water. Fixtures are to be keyed to symbols list and fixture schedule, indicating pipe sizes, vent stack, stack vent, vent and soil lines.

9. Chases and Shafts

For clarification purposes, include details and schematic connections to equipment, whenever necessary. Show the plumbing chases and shafts on the plans and sections, indicating all dimensions and clearances.

10. Commercial Kitchen Sinks and Decontamination Sinks

These sinks shall all be provided with lever operated drain installations.

F HVAC AND FIRE PROTECTION DESIGN CRITERIA

HVAC and Fire Protection systems and equipment shall be designed and engineered by a Mechanical Engineer licensed in the State of New York. The services of specialty Subconsultants shall be made available when required by the nature of the work. All work shall comply with the New York City Building Code

1. General Criteria

The HVAC and Fire Protection design shall include a report covering:

- **Analysis of Requirements for Operating Personnel**
  In addition to the multiple schemes considered, the Consultant shall investigate and propose mechanical systems that could eliminate the need for licensed operating personnel. These include but are not limited to smaller units, units with multiple compressors and non-refrigerant type systems.
- **Evaluation of Alternative Schemes**
  The Consultant shall analyze the advantages, disadvantages, annual owning and operating costs of not less than three schemes, including a recommended scheme.
- **Air Conditioning and Refrigeration**
  The Consultant shall present to the DDC a complete analysis of refrigerant use for all projects that include replacing or installing air conditioning and refrigeration equipment. This analysis will include the types of equipment, such as absorption equipment and alternate refrigerants, that are available to suit the specific project. The goal is to outline a range of equipment schemes in compliance with the Environmental Protection Agency laws and guidelines with respect to the use of CFC, HCFC and HFC refrigerants. The report will include requirements, restrictions, costs, advantages and disadvantages of each scheme. Recommendations shall be made to DDC and the Client Agency for review and approval.
- **Analysis of Automatic Controls Systems**
  Provide definitive analysis of the automatic controls systems, and proposals for all necessary modifications and upgrading. The control systems shall allow for seven-day programming, with night and weekend temperature set-back in winter. Analysis of building energy management systems shall be included as an alternative.

2. Surveys

For existing buildings, the Consultant shall include in the report a building survey, including heating and cooling plant, chimney, fire protection and ventilating systems. The survey shall record all equipment and conditions, including the age and condition of all heating and cooling equipment such as boilers, piping and insulation and the operating results achieved through their use.

3. Existing Systems Assessment

For existing systems the Consultant shall assess the Fire Protection and HVAC equipment and where necessary redesign in order to obtain an efficient and safe operating condition.

4. Equipment Connections

- **New Equipment Connected to Existing System**
  For existing buildings, the report shall state if the new equipment installation is connecting to an existing system, and, if so, whether the existing equipment is to be refurbished before the new connections are made. The Consultant shall provide all designs for the modifications and refurbishment by the end of Design Development.

- **Schedule of Equipment to be Overhauled**
  For existing equipment to be overhauled or replaced, the Consultant shall make a complete schedule of all HVAC equipment. The schedule will list working condition, requirements for repair and approximate remaining potential useful life.

5. Fuel Tanks

A separate report shall be included regarding the existence of all underground fuel tanks, for both heating oil and diesel oil, describing their condition, age and the code requirements for testing. The report shall provide recommendations for removal and replacement of tanks and contaminated soil.

6. Codes and Standards

An analysis shall be made of all applicable codes and standards, local laws, and regulatory agency requirements as they pertain to the provision of a complete system of fire protection and HVAC for the project. This will include seismic restraint and energy codes as required. As a minimum, the Consultant shall design to meet the following Codes:

- **Sheet Metal & Air Conditioning Contractors National Association (SMACNA)**
- **All ASHRAE Handbooks**
- **New York City Building Code**
- **New York State Energy Conservation Construction Code**
- **New York City Fire Protection Code**
- **New York State Department of Environmental Conservation Code**

7. Acoustical Design

The Consultant is responsible for providing for acoustical design services and testing, as required, to assure that the mechanical systems perform within the guidelines set forth by ASHRAE in the "*Recommended Indoor Design Goals for Air Conditioning System Sound Control.*" In addition, the entire mechanical installation, including all exterior and roof mounted equipment including air cooled chillers, air cooled refrigerant condensers, cooling towers, fans and air handling units, shall meet the noise control requirements of the NYC Building Code and the NYC Department of Environmental Protection, as well as all other applicable codes and local laws. If, in the opinion of the DDC, the Consultant does not have adequate experience or expertise in-house, DDC reserves the right to direct the Consultant to engage an approved acoustical consultant to perform the required design services, at no additional cost to the City.

8. Equipment Capacities

All equipment capacities and redundancy for heating systems, air conditioning plant and equipment, and all other major systems shall be reviewed and approved during the Schematic Design and the Design Development phases, prior to proceeding with Final Design. Installations for which DDC requires 100% plant capacity redundancy will be designed so that the plant capacity will remain at 100% in the event of the loss of one unit. For all other installations of two boilers or two chillers each piece of equipment shall have a minimum capacity of 75% of the total required load.

9. Ventilation

Outdoor ventilation air quantities shall be in accordance with ASHRAE Standard 62, latest revision, when differential costs above a system conforming to NYC Building Code are acceptable to the City. To provide for such a determination during Schematic Design, the Consultant shall clearly identify the impact on heating and cooling loads, construction costs and operating costs, of conforming to the ASHRAE recommendations. DDC shall review and approve the Consultant's recommended system, including outdoor air quantities, prior to the Consultant proceeding with Design Development.

10. Boiler System

Boiler selection shall be determined based on space conditions and simplicity of operation. The Consultant shall analyze standard or modular type boilers depending on the building use, initial and operating costs, and Client Agency preference. The Consultant shall fully coordinate requirements prior to final selection. The use of heat pump systems shall also be analyzed as an alternative.

11. Heating System

The heating system shall preferably be two-pipe forced hot water, zoned as required, with each zone having its own circulating pump or other means of providing independent control for each exposure and occupancy. Provide stand-by pumping capacity.

12. Oil Storage

Oil storage for heating shall be sufficient for a one-month supply, and shall be designed as per the latest New York State Department of Environmental Conservation regulations and all other applicable codes. The parameters of each project, and the oil storage capacity for emergency generators must be reviewed and approved by DDC and the Client Agency prior to proceeding with the Final Design phase. Unless otherwise directed, the Consultant shall provide for an independent storage tank for emergency generator fuel storage. The Consultant shall review space limitations and budget constraints during the Schematic Design phase. The Consultant's design for buried fuel tanks and related ancillary equipment such as piping and cathodic protection, shall be based on manufacturer's data for either double-wall steel tanks or double-wall fiberglass tanks. Contractors bidding on Consultant's design documents will be allowed to substitute steel for fiberglass or fiberglass for steel as an approved equal submission. The Consultant is responsible for shop drawing review.

13. Dual Fuel Burners

Where applicable the Consultant shall, during Schematic Design, investigate the feasibility of providing dual fuel burners for all new boiler equipment and for existing boilers with burners to be replaced.

14. Ductwork and Air Distribution

The Consultant shall provide for:

- **Diffusers and registers instead of grilles**
- **Framed security bars for HVAC openings or ducts 6" or larger in any dimension, for security applications**
- **Review of requirements for security with Client Agency**
- **Location of all duct smoke detectors, shown on the drawings**
- **Motorized dampers at outlets of kitchen range hood fans (utility fans)**
- **Fire dampers adjacent to each intake louver, gooseneck and penthouse**
- **Firestopping details**
- **Motorized damper at each exterior wall louver**
- **Motorized damper in lieu of backdraft damper**
- **Motorized damper at each roof penetration for HVAC units**
- **Locations of all fire dampers, shown on the drawings**
- **Turning vanes shall comply with SMACNA's HVAC Systems duct design standard**
- **Quadrant opposed blade dampers for balancing in lieu of splitter dampers**
- **Sheet metal ductwork only, do not use fiberglass ductwork**
- **External thermal duct insulation in lieu of internal insulation**
- **Ten gauge black iron for kitchen range hood exhaust ductwork**

15. Piping and Coils

Regarding piping and coils, the Consultant shall provide for the following, as required:

- **Condensate drain piping for all cooling coils with a deep seal trap**
- **Reverse return piping for hot water heating elements**
- **Three valve bypass for each float and thermostatic and bucket type trap**
- **All steam coils shall be of the freeze proof construction type**
- **Circulating freeze pump protection for all hot water heating coils**
- **Heating coils to temper all outdoor air intakes**
- **Three valve bypass for each control valve**
- **Thermostat or aquastat for each unit heater, cabinet heater, VAV box and air curtain**
- **Drain piping for each pre-action valve assembly and each sprinkler control valve assembly**
- **Refrigerant piping schematic flow diagrams. Pipe routing to and from interconnected pieces of equipment shall be sized and shown on the HVAC plans. Indicate all filter dryers, solenoid valves, strainers, pressure relief valves, flexible connections, receivers and sight glasses.**
- **Complete systems for water treatment, with one-year service contract.**
- **Steam or hot water for unit and cabinet heaters, and air curtains instead of electric.**
- **"Warm-up" valves for all steam services, as required.**
- **Blow-off valves at all strainers.**
- **Schedule 80 piping for condensate return.**
- **Schedule 40 piping for sprinkler work, do not use Schedule 10.**
- **Heat trace of all piping subject to outdoor freezing temperatures.**

16. Emergency Generator

Provide self-activating exhaust fan in connection with the emergency generator room, including fresh air and discharge ductwork for the emergency generator radiator. The fuel supply system shall include an electric transfer pump, an emergency hand pump, a day tank and an alarm activated by high and low level switches in the day tank. The engine room ventilation system shall be capable of providing sufficient air for engine cooling and combustion. The ventilation system shall include motorized dampers and thermostatically controlled bypass for engine room temperature control.

17. Exhaust Fan

Provide make up air source for each exhaust fan.

18. Louvers

Door louvers or a door undercut shall be provided for each room being exhausted or ventilated. Use a door undercut for less than 75 cfm and a door louver for 75 cfm or greater. All louver designations shall indicate net free area. Exterior louvers, including outdoor air intake louvers and fan discharge louvers should be positioned to deter potential vandalism.

19. Equipment Schedules

Heating element and fin tube schedules shall include length and capacity. The equipment schedules shall indicate motor brake horsepower, motor horsepower, voltage, phases, frequency, manufacturer, model number and Material Equipment Acceptance number.

20. HVAC Systems Controls

The determination of the type and complexity of control systems to be selected shall include an analysis of the Client Agency's maintenance staff operational preferences and budgetary constraints.

21. Commissioning

On select projects DDC will engage a Commissioning Agent, who monitors tests on the systems, and based on them, works with the team to develop solutions. The Commissioning Agent is involved in the design phase to develop and coordinate the commissioning effort among relevant trades, during the construction process to witness pre-functional tests and coordinate the systems, and finally to witness functional operation. For projects that require Consultant participation in developing commissioning specifications, the ASHRAE Guideline 1-1996 or subsequent versions shall be used as a basis for establishing required minimal criteria. Consultant shall participate in the Commissioning process as required.

22. Equipment Location

HVAC systems and equipment shall be integrated into the architectural design for both exterior and interior locations. In general, HVAC equipment should not be visible from the street. All roof-mounted equipment must be installed to the highest security standards. For interior equipment, consideration must be given to aesthetic compatibility with the building and noise levels.

23. Fire Protection

The Consultant shall provide a complete state of the art fire protection system compatible and coordinated with each architectural or mechanical design scheme, including but not limited to sprinklers, siamese, pumps, water supplies, water reserve, emergency power, smoke purge and fan shutdown. The design shall comply with the New York City Building Code, the New York City Fire Code, the National Fire Protection Code and all applicable local regulations. For coordination between trades for water supply regarding sprinkler and combined sprinkler/standpipe systems, see Chapter IX of this Guide.

G ELECTRICAL ENGINEERING DESIGN CRITERIA

Building and site electrical power and lighting systems and equipment shall be designed and engineered by an Electrical Engineer licensed in the State of New York. The services of specialty Subconsultants shall be made available when required by the nature of the work. All work shall comply with the New York City Building Code, New York City Electrical Code, and utility requirements.

1. Survey of Existing Conditions

For existing buildings, the Consultant shall survey and make recommendations for the re-use, replacement or modification of:

- **Lighting Fixtures**
  Refer to illumination levels, lamp bulbs, energy efficient lighting fixtures and controls.
- **Telephone Service**
  Evaluate the adequacy of the existing service.
- **Electrical Services**
  Refer to new loads for suitability of Utility's metering, capacity of service entrance equipment, power distribution system, panelboards and consideration of non-linear loads.
- **Auxiliary Systems**
  Evaluate fire alarm, communications (voice and data) and security systems.
- **Power Distribution Systems**
  The survey shall record the age and condition of all electric power distribution equipment.

2. Electrical Service

Request from the Utility Company electric service for a new building or a reinforcement of the electric service for an existing building. Submit to the Utility a site plan showing the building property line, electrical service entrance, equipment room, and a breakdown of the electric load. Request location of electric service point of entry into the building or to property line manhole or handhole, so as to provide a reasonable route to the electrical room and available short circuit current and metering requirements. Significant extra cost may result if the Utility Company cannot take the shortest route for the service connection. Provide DDC with copies of all Utility Company correspondence.

3. Telephone Service and Cable Television Service

Submit to the Utility Company a site plan with the property line indicated together with telephone requirements. Request location of telephone service point of entry into the building. Coordinate location and source of any planned or potential high-capacity internet lines. This also applies to cable television service when required.

4. Computer Technology

Computer use and changing information technology puts increasing demand on electrical service capacity, wiring and system flexibility. The Consultant should take into account current computer requirements and likely augmentation of equipment including peripherals and high-capacity internet lines when designing electrical systems. Computer panel boards shall have double-size neutrals, ground bus and built-in surge protection. Consider providing an uninterruptible power system.

5. Panel Locations

For existing buildings, show on plans all existing lighting, power and distribution panels together with panel schedules. Recommend re-use, modification or replacement.

6. Panel Schedules

For all panels provide complete panel schedules on the drawings, showing circuit number, circuit breaker trip rating, load in volt-amperes for each circuit, load description and location, summary of connected load and demand load. Provide twenty-five percent spare feeder capacity. For power panels, add conduit and cable size feeder for individual circuits. For fused switch panels, show switch and fuse rating. Provide twenty-five percent spare circuit breakers or fused switches. Show service voltage, phase, bus rating, main circuit breaker or switch and fuse if required. Indicate panel location and type of mounting. Panel boards shall have door-in-door trim with bolt-on circuit breakers or switches.

7. Conduit and Wiring

Conduit shall be concealed where possible. Heavy wall, rigid, galvanized steel conduit shall be installed where exposed or where required by the Code. Electrical metallic tubing (EMT) may be installed concealed in hung ceilings or walls. Compression fittings shall be used for EMT. Armored cable shall not be used. Flexible conduit shall be only used for short lengths. Provide a drag wire in all empty conduits. Cable connectors shall be of the copper pressure plate type. Connections to bus bars for cable sizes number 1/0 and larger, shall be made with two zinc-plated bolts. Aluminum conduit and wire shall not be used.

8. Power Distribution

Design a complete power distribution system. Show on the drawings an impedance diagram, which shall include short circuit calculations for all significant points. Fuses and circuit breakers shall be coordinated for selective tripping and selected for the interrupting capacity required. The voltage drop shall not exceed the limits permitted by the New York City Electrical Code. Provide system and equipment grounding in accordance with the New York City Electrical Code. If the load is one thousand KVA or larger, comply with the requirements of the Advisory Board of the New York City Building Department.

9. Coordination

Design electrical systems to avoid inappropriate juxtaposition with other utilities, mechanical and plumbing requirements. All engineering drawings are to be coordinated with the architect.

10. Motors

Design and specify power for motors and controls.

11. Emergency Systems

Design new emergency lighting and power systems or modify existing systems in place. Submit a detailed summary of the load indicating the largest size motor. Show grounding for the emergency generator. Decide whether a separately derived grounding system will be used. Uninterruptible Power Supply equipment may be used for computer equipment. Batteries shall be installed in a temperature-controlled environment.

12. Fire Alarm System

The fire alarm system shall be the addressable type. Design the fire alarm system in accordance with the Fire Department and Building Code requirements for the building occupancy. Submit a certificate stating that the fire alarm system complies with all requirements together with an application for plan examination by the Fire Department. The Fire Alarm System must be coordinated with the Fire Protection System.

13. Lightning Protection System

Design a lightning protection system for the building if required.

14. Continuity of Service

For existing buildings, specify continuity of service for power, light, and emergency systems, if the Client Agency intends to continue occupancy during alterations. Assume continuity of service unless otherwise indicated in the Specific Requirements or Task Order.

15. Equipment Removal

Show on separate demolition plans electrical equipment required to be removed or relocated. Show source of power from which this equipment shall be disconnected. Provide associated specifications. Indicate staging plans, if required.

16. Temporary Light and Power

Specify temporary light and power to be provided during construction under the Electrical Contract.

17. Load Shedding

Investigate costs and benefits of "load shedding." Costs will be associated with equipment and wiring. Benefits will relate to the reduced energy demand.

18. Drawings and Diagrams

- **Floor Plans**
  Shall show detail layout of concentrated runs to eliminate conflicts and interference with other trades.
- **All Home-Runs**
  Shall be shown and properly indexed as to number and size of conduit, wires and destination.
- **Lighting Fixture Shapes**
  With details of construction and mounting supports shall be shown on the drawings.
- **Single Line and Power Riser Diagrams**
  Shall be prepared to include electric service, main distribution panel and all downstream panelboards, emergency panels, and transformers.
- **Riser Diagrams**
  Shall be provided for fire alarm, smoke detector, security, data and telecommunications and other systems shown on the drawings.
- **Provide Separate Drawings**
  For lighting, power and low voltage systems such as fire alarm and telecommunication systems.

19. Electrical Closets

Design adequate electrical and communications closets, to conform to the requirements of the New York City Electrical Code, Bulletins 105 and 119.

20. Convenience Outlets

In offices and storage areas, convenience electrical outlets shall be spaced approximately eight feet on center around the perimeter of the room.

21. Fixture Outlets

All fixture outlets shall be marked with the fixture type and control point.

22. Harmonic Filters and Surge Suppressers

Provide stand alone transient voltage surge suppression devices with high frequency noise filtering for panelboards serving computers and other sensitive electronic equipment. Where significant non-linear loads are present, passive harmonic mitigation devices shall be installed on transformer secondary. If required, panelboards shall have built in surge suppressor equipment.

23. Reference Standards

Design electrical systems to meet the requirements of the most recent editions of the New York City Electrical Code, other relevant codes, standards and the General Electrical Requirements in the General Conditions of the Specifications.

24. Fluorescent Lighting

When fluorescent lighting is necessary, use energy efficient T8 fluorescent lamps with a minimum of 85 Color Rendering Index (CRI) for normal applications, and compact fluorescent lamps for most general, task and accent lighting. In lighting fixtures, use parabolic reflectors or anodized specular aluminum reflectors with parabolic louvers or diffusers. The ballasts shall be Class P thermal and Class A sound rated electronic ballasts with a maximum total harmonic distortion of ten per cent or less and a crest factor of 1.4 or less.

25. Indirect Lighting

In areas of intensive computer use, consider indirect lighting fixtures.

26. Exit Lighting

Exit lighting fixtures shall contain light emitting diodes.

27. Occupancy Sensors

Use infrared, ultrasonic, and microphonic occupancy sensors. Dual technology infrared and ultrasonic combination-type sensors are recommended.

28. Daylighting

Consider integrating controls with automated daylighting system.

29. High Intensity Discharge Lighting

Use metal halide lamps for high bay, exterior and floodlighting. If available for the luminaire selected, use pulse-start metal halide lamps. Use quartz standby lamps to provide emergency lighting when the voltage dips. Use electronic ballasts when available.

30. Illumination Levels

Design for illumination levels must meet criteria of the New York State Energy Conservation Code. They should reflect the standards established by the Illuminating Engineering Society (IES), unless otherwise noted in the Specific Requirements or Task Order.

31. High-Efficiency Fixtures

High efficiency lighting fixtures shall be used.

H HISTORIC PRESERVATION DESIGN CRITERIA

Historic preservation design criteria apply to work on structures, interiors, sites, streetscapes and works of art that fall into two categories:

Designated landmarks are those that are designated as landmarks and subject to regulatory oversight by the New York City Landmarks Preservation Commission (LPC) and by other state or federal agencies having jurisdiction

Landmark quality properties are those identified either as eligible for designation or as having significant historic, cultural, architectural or landscape features. Criteria and a list of landmark quality properties were established by the Landmarks Conservancy in 1977. The criteria may apply to an entire project or to part of a project, and may apply to the work of any trade or engineering discipline.

Standards and Guidelines

The Consultant must obtain from the DDC Historic Preservation Office the latest update of published guidelines, standards, rules, application forms and instructions pertaining to historic preservation from any agency having jurisdiction over a designated property. When a landmark quality property is not designated, the Secretary of the Interior's Standards will be the guiding standards. The goals of the project will determine which section of the standards will be most appropriate. The standards are written for specific project goals: protection, stabilization, rehabilitation, restoration or reconstruction. Every effort shall be made to achieve full compliance and to protect the future eligibility of the property for designation status.

Consultant Services

The extent of services described below may vary according to the overall scope of work. Other services may be required and may be more fully described in the Specific Requirements or Task Order. Typically, required services include:

1. **Research**

   These projects require documentary, historical and field research sufficient to inform the project scope and intent. Research will provide a sound basis for design decisions and verify conditions exposed during probes and/or construction.

2. **Evaluation of Significance**

   The Consultant is expected to prepare an evaluation of the relative importance of features relevant to preservation. The evaluation shall be based on research, and on an inventory of features such as spaces, materials, structural and other building systems, equipment, furnishings, stylistic details, craftsmanship, works of art, as well as historic or cultural significance.

3. **Existing Conditions**

   The Consultant shall provide a conditions report based on observation, interviews, probes and tests. The Consultant is expected to identify, plan and oversee probes and tests, to provide detailed reports, and to incorporate results into the design strategy.

4. **Salvage of Historic Artifacts**

   For appropriate elements, the Consultant is to identify building or site components for inclusion in the capital work. If a reuse cannot be found the Consultant is to arrange for their relocation or reuse by the Client agency. If not practical, the Consultant is to arrange for their sale and credit in the contract documents. Items to be considered include sculpture, decorative elements, doors and woodwork, furniture.

5. **Documentation**

   In the absence of existing measured drawings, the Consultant shall produce a set of base measured drawings for the areas of work included in the scope. Throughout the project, the Consultant shall keep a record of all changes to existing and original features including materials, methods, design

intent, and detailing. The Consultant shall provide photographic documentation of conditions and activities throughout the project.

6. Historic Structures Reports

Preservation services rendered as part of the project shall be documented in a way suitable for inclusion in a Historic Structures Report, noting all sources of information, both written and graphic. The Specific Requirements or Task Order for a project may require the Consultant to produce a complete Historic Structures Report as part of the project scope.

7. Application for Eligibility

The Consultant may be required to prepare an application for eligibility for the National or State Historic Register as an additional service.

8. Special Experience Requirements

The Consultant shall assist the DDC team in the specification of special experience requirements for the Contractor and/or Subcontractor and for all highly specialized trades. When finalized and approved, they shall become part of the Bid Package. During the Bid and Award phase, the Consultant shall assist in the review and verification of the special experience qualifications submitted by the Contractor and/or proposed subcontractors. The Consultant may be required to participate in site visits to view qualifying work.

9. Multiple Design Options

Design options should include at least one proposal that addresses complete conformance with the Secretary of the Interior's Standards. Each scheme must fully explain the approach and the consequences as they relate to preservation issues. Each such scheme must also be accompanied by a cost estimate, and must include a life-cycle analysis with long-term cost/benefit scenarios.

10. Historic Preservation Specialists

The Consultant shall provide a full range of preservation and conservation services by qualified experts. These experts shall be used wherever appropriate, in all phases of the project, including construction. The level of their participation and the extent of their responsibility shall be clearly defined at the beginning of the project. Specialists who may be required include, but are not limited to: historians, archaeologists, architectural and art conservators, materials specialists, historic structural and systems engineers, historic landscape architects, and advisors on special crafts associated with historic properties

11. Preservation Plan

The Consultant must develop a preservation plan, based on well-documented information and integrated with overall project objectives.

1 HIGH PERFORMANCE BUILDINGS DESIGN CRITERIA

The Department of Design and Construction integrates selected high performance building design objectives into the facilities it builds or renovates. Principles of high performance have evolved from environmentally responsible, sustainable practices that aim to raise building performance standards. These objectives and suggested measures to achieve them are detailed in the DDC *High Performance Building Guidelines* (April, 1999).

While all projects are encouraged to meet these objectives, select projects are designated as High Performance Buildings. In these cases, the Consultant shall develop a high performance plan following a workshop in which applicable measures drawn from *The Guidelines* will be identified. These measures shall be investigated and incorporated into the design as appropriate. Following are objectives:

1. Energy Use

Reduce energy use and demand through, integrated building design. This process uses space planning and siting to maximize the daylighting potential of the building envelope. Integrated design uses daylight to improve the indoor environment and to reduce electrical demand. It also uses energy modeling to analyze building envelope, HVAC, and lighting control options. It encourages 'right-sizing' of mechanical systems to avoid higher first costs. Where feasible, renewable energy sources such as photovoltaic cells, solar hot water, fuel cells and geothermal exchange are used.

2. Improved Indoor Environment

Improve indoor air quality by eliminating unhealthy emissions, such as volatile organic compounds, or VOCs, from building materials, products, and furnishings. Employ outside filtering and distribution techniques to control pollutants. Improve the thermal qualities and comfort levels of all occupied spaces. Maximize the use of controlled daylighting, and, where necessary, augment it with high quality artificial lighting. Provide good acoustic control. Wherever possible, offer occupants the ability to regulate personal comfort.

3. Resource Reduction, Pollution Prevention and Recycling

Where equivalent in quality, cost, and performance, use green building materials and interior furnishings that are made from recycled or renewable resources, are themselves recyclable, and that have been manufactured in a manner least damaging to the environment. Implement construction and demolition waste prevention and management strategies. In addition, design for selective site-sorting of materials for salvage, recycling, or disposal.

4. Building Operations Resource Management

Design in ways that promote good building operations practices. These include incorporating systems to conserve water, to integrate everyday waste recycling, and to reduce the need for harmful maintenance chemicals and practices.

J INVESTIGATION CRITERIA FOR STRUCTURES AND SOIL

1. Probes

When appropriate the Consultant shall develop and submit a plan for probing and testing existing structures. This plan shall indicate location, methods of probing and testing, as well as objectives.

- **Timing**
  Where probes are necessary to clarify existing conditions, the Consultant shall request them at the Pre-Preliminary phase, or, when this phase is not included, during the Schematic Design phase. Probing existing structures shall be performed not only to solve technical uncertainty, but also to avoid delays and uncertainty during construction operations.
- **Number of Probes**
  The number, locations and extent of probes should be determined to provide sufficient understanding of existing conditions. The Consultant is required to be present when these probes take place so as to note the conditions on site and direct the Contractor. When the initial probes do not offer conclusive results, additional probes shall be immediately ordered in the field to avoid delay.
- **Probing and Testing Report**
  A detailed report on the findings of the approved Probing and Testing Plan shall be submitted to the Department of Design and Construction. It will include location, photographs, dimensional data, sketches and any other material necessary to support the findings.

2. Subsurface Investigation

In addition to providing for a suitable foundation solution, the Consultant is expected to use best professional judgment and experience to determine a soil exploration program that will reasonably clarify soil related work. The Consultant is responsible for the geo-technical analysis and engineering of the project.

- **Site Visits**
  All projects that require excavation and foundation work will be visited at the start of Pre-Preliminary or Schematic Design by the Design Consultant's Structural Engineer or geo-technician. *This site visit is a contractual obligation.* Based on the project requirements and as a result of this field visit the program of soil exploration shall be initiated.
- **Soil Exploration Program**
  The soil exploration program should enable the determination of the optimal foundation solution as well as the reduction of uncertainty during construction. The Department of Design and Construction does not place a maximum limit on the number of borings to be taken. The number and type of investigations should be based on reasonable economic and engineering decisions.
- **Subsurface Unit**
  At the earliest project stage the Consultant shall consult through the DDC Project Manager with the DDC Subsurface Exploration Unit to determine a preliminary number of borings, their location and other required investigations. Contact with the Subsurface Unit shall be maintained throughout site exploration. The Subsurface Unit shall be represented at the Design Kick-off Meeting.
- **Additional Borings**
  When the Consultant finds that the preliminary borings are not sufficient to provide information for design and construction, additional borings shall be ordered.

3. Number of Borings

As a minimum, the number of borings shall meet the requirements of New York City Building Code and shall be determined by the experience of the Consultant. To manifest its intent of obtaining better soil information, the Department of Design and Construction established the additional minimum conditions listed below:

- **Minimum**
  The minimum number of borings for any new project shall be four.
- **Maximum Distance**
  The maximum distance between two adjacent borings shall be one hundred feet.
- **Additional Borings**
  Where footings bear on rock, one additional boring will be taken for every three borings required by the New York City Building Code. For sites where a previous building was demolished, take two additional fifteen foot deep borings.
- **Building Code**
  The relaxation in number of borings allowed by Article 2, paragraph 2 of the New York City Building Code shall not be applied or accepted.

4. Field Crew Decisions

DDC technical employees monitor borings and classify soils. These DDC field crews have the latitude to perform additional borings whenever, in their judgment, field conditions require. The conditions below automatically trigger new borings.

- **Near Surface Footing**
  For proposed near surface footings, where two consecutive borings show fill levels differing by more than six feet, an additional boring, halfway between initial borings shall be performed.
- **Extreme Conditions**
  For every boring that did not reach its depth due to extreme conditions, two additional borings shall be performed.

5. Water Level

- **Update Information**
  For sites where there are sufficient existing borings, water level information older than ten years shall be updated.
- **Measurement Intervals**
  For sites in the vicinity of bodies of water, the water level shall be measured three times at intervals of approximately four weeks. For other sites it is required to have two readings spaced four weeks apart.

6. Adjacent Foundations

- **Information**
  Information on neighboring footings can be obtained by exploratory pits. Funds for such pits are provided by the individual projects. The Department of Design and Construction has probing requirement contracts that can be used for this purpose.
- **Research**
  The Consultant is responsible for conducting research at the Building Department to obtain information on existing adjacent buildings. If necessary, assistance may be requested from the Permits and Approval Unit of the Department of Design and Construction.
- **Site Visit**
  During the site visit the Consultant and the Structural Engineer shall attempt to visit basements of adjacent buildings.

K ENVIRONMENTAL DESIGN QUALITY

The design process must respond to environmental concerns and the project design must incorporate measures to mitigate adverse environmental impacts whenever feasible. The environmental review process for any project will address rules and regulations established by the New York City Department of Environmental Protection (DEP), New York State Departments of Health and Labor and applicable United States Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) standards. While the vast majority of environmental issues within buildings undergoing renovation are associated with the presence of asbestos-containing materials (e.g.; spray-on fireproofing, pipe insulation and vinyl asbestos tiles) other hazards might be present. Examples of these include lead-based paint, polychlorinated biphenyls (PCBs), and biological contaminants (such as mold and pigeon droppings). Excavated soils may contain volatile organic compounds (VOCs), toxic metals or other contaminants from past hazardous materials disposal practices.

DDC's Environmental Health and Safety Services (EHSS) Bureau has developed a strict set of special experience qualifications for environmental consultants and sub-contractors

The Consultant may be responsible for obtaining the services of a qualified firm or individuals licensed or certified to perform hazardous materials investigations in the City of New York. . Any firm selected to provide such environmental services requires pre-approval by DDC's EHSS Bureau before they can participate in the project. When DDC provides Environmental Services the Consultant is expected to support and cooperate in the Agency's efforts.

On jobs on which the Consultant is responsible for obtaining these environmental services, they shall meet the standards described below.

1. Asbestos-Containing Materials (ACM):

- **Investigator Survey**
  All buildings scheduled for construction/renovation, including recently constructed buildings or newly renovated areas, must be surveyed by a New York City Investigator to identify the presence of ACM which could be impacted during construction/renovation.
- **Abatement in Contract Documents**
  With limited exceptions, contract documents shall include abatement of all ACM that can reasonably be expected to be disturbed by construction/renovation activities.
- **Outside Construction Area**
  When inspecting for asbestos or preparing abatement contract documents, give specific consideration to areas that may be impacted outside the immediate renovation/construction area, nearby restricted access areas, and abatement phasing requirements.
- **Historical Reports**
  Historical asbestos survey reports have been compiled on a building-by-building basis. The DDC EHSS Bureau maintains files of prior asbestos survey reports and must be contacted by the Consultant prior to any survey work.

2. Lead-Containing Materials:

- **Protect Workers**
  The Consultant is advised that lead-containing materials have the potential to adversely impact the health of construction workers and others located adjacent to the work area and appropriate precautions shall be specified.
- **Identify Waste in Bid Documents**
  Lead-containing materials may be designated as a hazardous waste when disposed of. The Consultant will be responsible for identifying any lead waste disposal requirements and noting them the in bid documents.
- **Note Potential Lead Release in Bid Documents**
  The Consultant shall be responsible for identifying any construction tasks that could result in releases of lead for which the contractor may become responsible and for noting them in the bid documents.
- **Regulations on Child-Occupancy**

In buildings that would be considered "child occupied," the Consultant will be responsible for developing lead control procedures in conformance with federal and state requirements for child-occupied buildings.

3. Other Hazardous Materials:

- **Site Contamination**
  Performing construction in areas of known site contamination is likely to increase project costs significantly by adding follow-up environmental investigation and reporting. In the design phase, the Consultant must review existing environmental due diligence reports and other historical records to ascertain whether other contaminants might be present and to develop bid documents that will adequately address handling, removal and disposal of those materials. The DDC EHSS Bureau has had experience with such issues and may be consulted for assistance in developing specifications and coordinating with regulatory agencies.
- **Waste Management**
  Failure to adequately identify hazardous waste streams, use approved waste transporters, or use approved waste disposal facilities may expose the City to long-term liability and/or result in costly change orders. The Consultant shall ensure that all applicable hazardous waste rules and regulations are fully understood and addressed in specifications and contract documents.
- **PCB-Containing Materials**
  Oil-filled electrical equipment (transformers, bushings, capacitors, cooling and insulating fluids, contaminated soil, etc.) may pose a long-term liability to the City and are subject to existing EPA and state regulations. The presence of such materials must be identified before or during the Design Development phase and the Consultant shall provide appropriate guidance for handling and disposal.
- **Underground Storage Tanks**
  Underground storage tank systems (USTs) can threaten the environment and pose a long-term liability for the City. State and Federal regulations concerning USTs must be followed. The Consultant shall identify the presence of all USTs that may be impacted by the construction work and include appropriate specifications in contract documents.
- **Other Environmental Issues**
  The Consultant is responsible in the design phase for identifying any other additional environmental issues that may be created by the proposed construction.

II. PRE-PRELIMINARY DESIGN

II. PRE-PRELIMINARY DESIGN

A PRE-PRELIMINARY DESIGN SERVICES

When a clearly defined program does not exist, or if further investigation is necessary, the Consultant will be requested to perform Pre-Preliminary work. This may include an existing conditions survey and master planning. When Pre-Preliminary services, including studies, are requested in the Specific Requirements or Task Order, the Consultant shall evaluate the program, the existing conditions and the design parameters. The Consultant shall prepare as many studies as reasonably may be required in order to develop a detailed Scope of Work for the project until the Department of Design and Construction accepts one such Scope of Work. Studies shall be accompanied by associated Cost Estimates and any additional items of work called for in the Specific Requirements or Task Order. After acceptance by DDC of the detailed Scope of Work for the project, the Consultant shall prepare and submit the required number of copies of the Pre-Preliminary Report and related estimate of the construction cost to the Department of Design and Construction
Pre-Preliminary Design services include:

1. Pre-Preliminary Design Kick-Off Meeting

A meeting attended by the Consultant, the DDC Project Manager, the Client Agency representative, the DDC Design Review Team Leader and relevant DDC team members shall be held at the start of the project. At this meeting all important project requirements shall be discussed, including:

- **Requirements of the Contract**
  -Which include the Agreement, the Specific Requirements or Task Order and the Design Consultants Guide.
- **Project Intent and Goals**
- **Project Scope**
- **Client Agency Standards and User Needs**
- **Budget**
- **Site Data**
  -Including review of Asian Longhorn Beetle containment requirements.
- **Schedule**
  The Consultant shall present a schedule for approval by DDC for the entire project duration. This includes, but is not limited to, a complete activities checklist with milestones, due dates for all submittals, and the construction duration.

2. Develop Concept and Prepare Alternative Schemes

The Consultant shall meet with the Client Agency representative, and prepare a program and estimate, identifying all personnel and equipment and corresponding space requirements and adjacencies. The Consultant shall coordinate program and cost information and develop as many Pre-Preliminary concepts as reasonably may be required, with a minimum of three, until DDC accepts one such scheme.

3. Cost Estimating

A cost estimate in Construction Specification Institute format must be submitted for each Pre-Preliminary design alternative presented, indicating the preferred scheme. For each item or combination of items in the cost estimate, identify the quantity required, the unit of measurement, the unit cost and the total cost. Provide a summation of construction cost for each trade in the estimate, as appropriate to the project. Include in the cost estimate general conditions at ten percent, overhead and profit at fifteen percent, and design contingency at ten percent.

4. Progress Meetings

The Consultant shall attend, participate and make submittals at progress meetings to be scheduled by the DDC Project Manager. These meetings shall be recorded by the Consultant in Meeting Minutes. Criteria for these minutes appear in Section 9 under "Meetings."

5. Environmental Design Meeting

For all projects the Consultant and the Subconsultants shall participate in a meeting in which required and recommended environmental design features will be reviewed and discussed.

6. High Performance Pilot Projects

For selected projects, the Consultant and their Subconsultants shall develop and implement a plan following a workshop in conformance with DDC High Performance Building Guidelines.

7. Pre-Preliminary Tasks

- **Scope**
  Develop the total scope of the project by means of studies, analysis, field reconnaissance and probes.
- **Program**
  Develop or validate the Client Agency's program, or modify it as required. Translate the Client Agency program into specific square foot and function relationships.
- **Priorities**
  Identify the Client Agency priorities and identify whether budget adjustments are necessary.
- **Presentation**
  Present various conceptual schemes for evaluation. These should include budgets and recommendations that will enable preliminary design decisions to be made.
- **Scheduling**
  Confirm a time frame for accomplishing the project, acknowledging any special conditions that could impact the schedule under each alternative. Special conditions may include items such as phasing, relocation, swing space and adequacy of funding.
- **Utilities**
  Write to the Utility Companies, including the telephone company, to determine the location of service entry points into the building and the service voltage.

8. Existing Condition Drawings

The Consultant shall prepare drawings showing the existing conditions. These drawings shall be labeled, titled, dimensioned and shall comprehensively relate the context for design and program assumptions.

9. Space Programming

Space requirements are a function of building operations as well as the number of people intended to occupy the facility. The Consultant shall explore implications of alternate methods of operation and make recommendations as to related physical plant requirements.

10. Analysis

Consultant analytical services include:

- **Inventory of Existing Space**
  Survey and prepare an inventory of the use of existing space and unit activities for the functions included in the scope of the program. A detailed analysis shall be made of the functional and area requirements of each of these activities. Compare the extent of net existing area space with that of the proposed space.

- **Site Analysis**
  Study the urban setting of the site and the surrounding properties. Establish whether or not the project site is within the most current NYSDAM (NY State Department of Agriculture Markets) quarantine area for the Asian Longhorned Beetle (ALB). Determine the suitability of the existing site conditions for the proposed work. Inventory site plantings, subsoil conditions, offsite and on-site views, existing site amenities and constraints for site development. If the project site is within the most current NYSDAM quarantine area for the ALB, identify beetle host plant species on project site per NYSDAM.
- **Anticipated Growth or Diminishment**
  Study and analyze space and area requirements based on anticipated growth or program diminishment. Time periods for projecting future needs shall be approved by the Department of Design and Construction and by the Client Agency representative.
- **Individual Work Space Standards**
  Establish or confirm individual work space standards for each category of personnel to ensure uniformity of treatment and efficient space use.
- **Adjacency and Work Flow**
  Determine adjacency requirements and work patterns during normal and peak use period.
- **Special Purpose Areas**
  Develop space requirements for special purpose areas as defined by the DDC Project Manager as the project develops.
- **Building Service Areas**
  Develop requirements for building service areas, to allow for proper operation and building maintenance. These include supply and storage areas and spaces allocated for waste disposal and delivery systems.
- **Service Requirements**
  Establish the requirements for building management, telephones, communications, electrical, plumbing, mechanical needs, special lighting and acoustical treatment.
- **Mechanical Requirements**
  Space shall be programmed for mechanical equipment of sufficient capacity to serve the facility with heating, ventilating, air conditioning, fire protection, and plumbing.

11. Furniture and Equipment

For projects involving furniture and equipment, the Consultant is responsible for alternatives showing satisfaction of program by different furniture arrangements. Upon approval of a single alternative, determine a separate furniture and equipment budget.

12. Master Planning

If DDC and the Client Agency determine that a project's land use is complex and will require long-term development phasing and multiple-year funding, then that project shall be designated a Master Plan. Master Plans may be either primarily site-oriented, building-oriented (single or multiple), oriented to the exterior or interior restoration of a building or buildings, or any combination thereof.

Except for furniture and equipment schemes, Master Planning shall require all previously described Pre-Preliminary services, but they shall demonstrate the depth and complexity of research appropriate to a multi-year, large-scale scope.

- **Scope**
  A Master Plan may encompass not only construction, but landscape architectural, ecological, regional, land use, economic development, traffic and community issues.

- **Multi-disciplinary Approach**
  Because of the comprehensive, long-term nature of a Master Plan's scope, the approach to, and conduct of, the Master Planning process must be completely multi-disciplinary through its duration. In addition to design professionals, Master Planning may require Subconsultants from such specialized fields as history, landscape architectural preservation and architectural preservation, demography, sociology, traffic and transportation, planning and economic planning.
- **Inventory**
  As in the standard Pre-Preliminary design phase, Master Planners shall examine a project's existing ecological, microclimatological, urban design, historical, zoning, and regulatory characteristics, as well as the concerns of pertinent community-based groups and jurisdictional entities as they relate to the project site and any existing or proposed structures. Beyond these requirements Master Planning shall be simultaneously more sweeping in its data gathering and more attentive to evaluating the long-term impacts such gathered data would have upon the ultimate planning and design recommendations to be generated. Master Planners shall conduct their inventory so as to best synthesize data into planning and design issues. These issues must then be prioritized to guide recommended development options.
- **Program**
  The Master Plan will investigate the known and potential growth needs of the Client Agency in the years to be covered by the Master Plan.
- **Phase One Program**
  After inventory, analysis, issue identification and prioritization, and the development of various proposals, the Consultant and the Client Agency and DDC will choose to pursue one Recommended Option. This option will be developed to document every phase of the multi-year plan, and will include a program for Phase One based on available funding and possibly Phase Two of the plan.

B PRE-PRELIMINARY DESIGN DELIVERABLES

1. Progress Meeting Minutes

The Consultant shall prepare Minutes, following the DDC format, within three working days of Progress Meetings. Criteria for these meetings appear in Section IX under "meetings." The Consultant shall distribute Minutes to all attendees.

- **Minutes summarize:**
  - **Decisions Made**
    -And by whom they are made.
  - **Open Issues**
    -The persons responsible and the schedule for resolution.

2. Interim Reports

The Consultant shall submit interim reports for review in graphic and descriptive form, as many as may be reasonably required in the conduct of the study, until approvals are granted.

3. Report Preparation

Data shall be submitted for comments as directed by the DDC Project Manager, and must be approved by the Department of Design and Construction before the final report is prepared.

4. Final Report

The final Pre-Preliminary Report shall contain descriptive data and graphic justification in support of recommendations made concerning the facility. The report will serve as a public record in support of future building program decisions.
The Final Report shall contain:

- **Summary of Requirements**
  -Consists of data, and a full description of the recommendations, which can be used as an architectural program.
- **Graphic and Descriptive Documentation**
  -By activity, for current and future space needs.
- **Site Development**
  -Assets and constraints. If site is within the most current NYSDAM quarantine area for the Asian Longhorn Beetle, report must identify all street trees and plant specimens known to be host species.
- **Appropriate Space Standards**
  -For each applicable activity for current and future personnel.
- **Space Requirements**
  -Determination and listing of space requirements for all special uses and common use functions.
- **Environmental Program Matrix**
  Prepare a matrix describing preferred conditions for each major type of space in the program. The conditions should include access to daylight, orientation views, acoustic needs, air quality and lighting quality. See sample matrix on DDC website, www.nyc.gov/buildnyc.
- **Environmental Design Meeting Minutes**
- **High Performance Plan**
  -As defined in the DDC High Performance Building Guidelines for selected projects.
- **Individual Work Space Standards**
  -Appropriate to staff positions.

- **Flow Diagrams**
  -Indicating the required circulation patterns and physical relationships of both internal and external activities.
- **Projected Space Program**
  -Noting the functions, space allocations, occupancy, staff, visitors and size of new facilities. The report shall list usable net area and gross area tabulations, complete for each of the functional requirements of the proposed project. The net area tabulations shall be indicated for all distinct program spaces.
- **Alternative Schemes**
  -Investigated during the Pre-Preliminary phase.
- **Preliminary Construction Cost**
  -For each of the alternatives. Include in the construction estimate general conditions at ten percent, overhead and profit at fifteen percent, and design contingency at ten percent.
- **Schedule**
  The Consultant shall present a schedule for approval by DDC for the entire project duration. This includes, but is not limited to, a complete activities checklist with milestones, due dates for all submittals, and the construction duration.
- **Zoning Analysis**
  -And recommendations, including set-backs, height limitations and required variances.
- **Building Code Compliance**
  -Compliance with New York City Building Code, Building Classification and Construction Classification.
- **Furniture and Equipment List**
  -Required for use in each typical and atypical space.
- **Inventory and Use**
  -Of all existing spaces, indicating anticipated growth or diminishment of use, adjacency of work space requirements, special purpose areas, facilities to be shared, support areas and building service requirements.
- **Power**
  Submit an electric load summary together with a single line diagram.
- **Lighting**
  List the proposed foot-candle level for each room or area.
- **Fire Alarm**
  Establish the code-required system. Describe the proposed system.
- **Security System**
  Describe the proposed system if required by the project.
- **Communication Requirements**
  Describe the proposed telephone data and communication requirements.

5. Report Requirements

Consultant shall prepare and submit six copies of the report to DDC unless otherwise specified in the Specific Requirements or Task Order. Pre-Preliminary reports shall be:

- **In Conformance**
  -With the requirements of the project and the Contract.
- **Bound**
  -With card stock or other acceptable cover appropriate for presentation purposes.
- **Titled**
  -On the cover.
- **Transmitted**
  -By letter of transmittal with the Consultant's signatures.

- **Organized**
  -With a table of contents.
- **Summarized**
  -Containing an executive summary, descriptive text, implementation schedule, design calculations and cost estimates.
- **Illustrated**
  -With drawings to appropriate scale and photographs, as required.

6. Budget Substantiation

If additional funding is necessary and the project scope cannot be reduced, the responsibility to secure such additional funds from the New York City Office of Management and Budget rests with the Client Agency. The Consultant, along with DDC staff, will be available to support such requests by providing technical information and scope substantiation

7. Master Plan

If the Specific Requirements or Task Order for a project mandate generation of a Master Plan, the Consultant shall develop a Master Plan Report.

- **Report**
  The Report shall be illustrated with sketches, plans, details, photographs, flowcharts, photographs of models or computer simulations, drawings, and any additional materials that clarify the conclusions, proposals and presentation. The Report shall be titled, summarized, and indexed, and shall be organized in sequence with section headings. The Master Plan Report shall include an Executive Summary, existing conditions inventory, analysis of inventoried data, identification of planning and design issues, prioritization of planning and design issues, planning and design options, a recommended planning and design option, development phasing and phased costs. The Report shall provide a recommended and approved Scope of Work and Cost Estimate for Phase One of the project.
- **Appendices**
  The Master Plan may require appendices documenting interviews, space planning standards, detailed descriptions of existing site and building systems, detailed cost estimates, rejected alternate development proposals (including reasons for rejection), summaries of previous reports and records of research. Sources for all information shall be identified.
- **Drawings**
  The Master Plan shall include a rendered perspective drawing of the site showing all projected work complete. It shall also include drawings of preceding phases of the plan, as well as any pertinent resource inventory and maps. These drawings and maps shall be reproduced in the body of the report and at a presentation size of at least 24 x 36 inches.
- **Phase One**
  The Consultant shall include a description of the first phase of work to be completed in the accepted plan. A description of the second phase may also be required.

8. Design Review Comments Response

The Consultant is required to respond, in writing (electronic mail is acceptable), to comments from the Architecture and Engineering Section of the DDC. Response should be within two weeks, complete, and shall address the spirit of the comment as well as the specific issues.

9. Acceptance

The project cannot move forward without a written sign-off approving the Pre-Preliminary Report. A critical analysis and examination of the full range of options and issues in this early phase avoids excessive changes that would require scope or budget adjustments later in the design process.

III. SCHEMATIC DESIGN

III. SCHEMATIC DESIGN

A SCHEMATIC DESIGN SERVICES

The Preliminary Design phase consists of two sub-phases, Schematic Design and Design Development. During Schematic Design alternative spatial solutions to the defined Scope of Work are explored, priced and presented with the aid of site plans, architectural plans showing all programmed spaces, elevations and sections. At the end of Schematic Design one set of alternatives is selected to be carried into the Design Development phase. If the project involves exterior architectural or landscaping design on City-owned property it will be presented by the Consultant to the Art Commission for Preliminary Approval.
Schematic Design services include:

1. Schematic Design Kick-Off Meeting

A meeting of the Consultant, the Client Agency representative, the DDC Project Manager, and Team Leader and other team members, as required, shall occur at the start of each phase of the project, including Schematic Design. Project requirements shall be reviewed, including:

- **Requirements of the Contract**
  -Which include the Agreement, the Specific Requirements or Task Order and the Design Consultants Guide.
- **Project Intent and Goals**
- **Project Scope**
- **Client Agency Standards and User Needs**
- **Budget**
- **Site Data**
  -Including review of Asian Longhorn Beetle containment requirements if not already addressed in Pre-Preliminary design.
- **Schedule**
  The Consultant shall present a schedule for approval by DDC for the entire project duration. This includes, but is not limited to, a complete activities checklist with milestones, due dates for all submittals, and the construction duration.
- **Approvals**
  -Required on work by the Consultant.

2. Evaluate Program and Prepare Alternative Schemes

The Consultant shall evaluate the program and prepare as many Schematic Design alternatives as reasonably may be required, with a minimum of three, until DDC accepts one such scheme. Each scheme shall be accompanied by a zoning analysis, if applicable, and a cost estimate.

3. Cost Estimating

A cost estimate in Construction Specification Institute format must be submitted for each Schematic Design alternative presented. For each item or combination of items in the cost estimate, identify the quantity required, the unit of measurement, the unit cost and the total cost. Provide a summation of construction cost for each trade in the estimate, as appropriate to the project. Include in the cost estimate general conditions at ten percent, overhead and profit at fifteen percent, and design contingency at ten percent. The Schematic Design cost estimate shall reflect the New York City Prevailing Wage Rates. Sales tax shall not be included in the estimate.

4. Progress Meetings

The Consultant shall attend, participate and make submittals at progress meetings to be scheduled by the DDC Project Manager. These meetings shall be recorded by the Consultant in Meeting Minutes. Criteria for these minutes appear in Section 9 under "Meetings."

5. Environmental Design Meeting

For all projects, if no Pre-Preliminary phase, the Consultant and the Subconsultants shall participate in a meeting in which required and recommended environmental design features will be reviewed and discussed.

6. High Performance Pilot Projects

When not previously part of the Pre-Preliminary phase, for selected projects the Consultant and the Subconsultants shall develop and implement a plan following a workshop in conformance with DDC High Performance Building Guidelines.

7. Design Considerations

The following elements, among others, shall be included:

- **Siting and orientation**
- **Configuration and massing**
- **Site paving, plantings and site furnishings**
- **Exterior cladding**
- **Roofing systems**
- **Structural design**
- **Mechanical design**
- **Plumbing design**
- **Electrical design**
- **Elevator design**
- **Program function**
- **Adjacencies, circulation**
- **Furniture, fixtures and equipment**

8. Site Analysis

When not included in a Pre-Preliminary phase, study the urban setting of the site and the surrounding properties. Establish whether or not the project site is within the most current NYSDAM (NY State Department of Agriculture Markets) quarantine area for the Asian Longhorned Beetle (ALB). Determine the suitability of the existing site conditions for the proposed work. Inventory site plantings, subsoil conditions, offsite and on-site views, existing site amenities and constraints for site development. If the project site is within the most current NYSDAM quarantine area for the ALB, identify beetle host plant species on project site per NYSDAM.

9. Design Criteria Requirements

All Schematic Design alternatives shall meet DDC Design Criteria (Section I) requirements. Maintenance, operating and initial costs shall be included for each alternative.

10. On-Board Reviews

For projects with accelerated delivery schedules, the DDC Project Manager may request that the Consultant and DDC Review Team participate in "on-board" reviews. On-board review consists of a review of documents at the time of submission by DDC review staff in the presence of the Consultant and all pertinent subconsultants. Such reviews may take place at DDC or in the Consultant's office.

11. Review

The Consultant shall submit documents for design review to the Department of Design and Construction and the Client Agency. The Consultant shall meet with regulatory agencies as appropriate for this phase of the work.

12. Art Commission and Landmarks Preservation Commission

The Consultant will present all projects requiring exterior work to the Art Commission, other than those accurately described as "replacement-in-kind." Designated landmarks and new structures in designated historic districts shall be presented to the Landmarks Preservation Commission instead of the Art Commission.

13. Value Engineering

If requested by the Office of Management and Budget, a Value Engineering Study may occur before final acceptance of the Schematic Design. Participation by the Consultant, if not previously anticipated in the Specific Requirements or Task Order, will be considered a supplemental service.

14. Presentation and Acceptance of the Schematic Design

The Consultant shall present the Schematic Design to DDC and the Client Agency at the DDC offices. Acceptance is contingent upon the approval of the Art Commission and the Landmarks Preservation Commission if required. The Consultant shall cooperate to the extent requested in obtaining these and any other required approvals.

15. Percent for Art

If the project is deemed eligible, an artist will be generally selected during the Schematic Design phase in accordance with the procedures of the Percent for Art Program of the New York City Department of Cultural Affairs. The Consultant will enter into a direct contract with the artist, will attend design coordination meetings and will collaborate with the artist so as to integrate artwork into the project conception.

16. Constructability Review

In projects that will require a Construction Manager (CM) to provide a Constructability Review, the Consultant must procure those services on a schedule that will allow the CM to attend 75% final review meetings. Consultants must begin soliciting bids for this service in the Schematic Design phase. The Construction Manager will be a special subconsultant under the Contract's Additional Professional Services provisions. The Department of Design and Construction must approve the Construction Manager and the proposed fee.

17. Peer Review

Selected projects shall be designated during Schematic Design for presentation by the Consultant to the Commissioner in a "Peer Review" meeting. These meetings occur after completion of the Schematic Design. Appropriate materials shall be required to explain the project design.

18. Approvals to Proceed

The Consultant shall obtain written approval to proceed from the Department of Design and Construction and the Client Agency at the end of Schematic Design before proceeding with Design Development.

B SCHEMATIC DESIGN DELIVERABLES

1. Progress Meeting Minutes

The Consultant shall prepare Minutes, following the DDC format, within three working days of Progress Meetings. Criteria for these minutes appear in Section IX under "Meetings." The Consultant shall distribute Minutes to all attendees.

Minutes summarize:

- **Decisions Made**
  -And by whom they are made.
- **Open Issues**
  -The persons responsible and the schedule for resolution.

2. Drawings

Schematic Design documents shall illustrate the resolution of the program requirements and shall be dimensioned and scaled, showing floor-to-floor heights and room sizes. The Consultant shall demonstrate the design solution in terms of economic, functional and aesthetic factors.

3. Site Plan

As required by the nature of the project, a site plan shall indicate:

- **Basic materials**
- **Physical features and site furnishings**
- **Grading**
- **Site utility systems**
- **Paving**
- **Property lines**
- **Easements**
- **Adjacent buildings**
- **Plantings**

4. Floor Plans

Floor plans shall be prepared for the basement and all occupied floors. Floor plans shall indicate all program spaces. Corridors, stairs, elevators, exits and compliance with accessibility requirements shall be clearly delineated. Engineering drawings, including structural, HVAC/Fire protection, plumbing and electrical systems shall be included.

5. Roof Plan

Roof plans shall be prepared showing the roof storm water drainage plan, all roof-mounted mechanical equipment and skylights.

6. Exterior Elevations and Sections

Exterior elevations will be prepared with sections indicating fenestration, entry, access, site considerations and materials.

7. Existing Condition Drawings

Existing condition drawings will be prepared showing areas and elements requiring demolition, salvage and protection.

8. Key Plans

Key plans shall adequately describe project location and orientation.

9. Axonometrics and Perspectives

Axonometrics and perspectives and other sketches, shall be prepared as necessary to fully illustrate and document all major elements of the design and massing.

10. Study Models

Study models will show three-dimensional volumes and proportions, and, when necessary, the contextual relationship to surrounding buildings and streetscape. Study models are of particular importance for building additions, even of limited scope and area. They are required by the Art Commission.

11. Schematic Design Report

The Schematic Design Report shall contain:

- **Project Objectives**
  -Statement of project objectives.
- **Existing Conditions**
  -Review and documentation of existing conditions.
- **Program Requirements**
  -Review and documentation of the program requirements.
- **Alternative Designs**
  -Alternative designs considered with detailed explanations. A minimum of three schemes will be required, unless otherwise determined by DDC.
- **Recommended Design**
  -Presentation of the recommended design, including analysis of architectural and engineering concepts and suitability to program requirements.
- **Site Design**
  -Provide description of site concept plan. In addition, for projects with no Pre-Preliminary phase, if site is within the most current NYSDAM quarantine area for the Asian Longhorn Beetle, report must identify all street trees and plant specimens known to be host species.
- **Circulation Study**
  A diagrammatic circulation study showing horizontal and vertical circulation is required. The circulation study will include an elevator analysis and recommendations for the number of elevators, type of elevator systems and type of control systems.
- **Environmental Program Matrix**
  In projects with no Pre-Preliminary phase, Consultant must prepare a matrix describing preferred conditions for each major type of space in the program. The conditions should include access to daylight, orientation views, acoustic needs, air quality and lighting quality. See sample matrix on DDC sustainable website, www.nyc.gov/buildnyc. In projects with a Pre-Preliminary phase, the Consultant must review each proposed design in relation to the previously-developed matrix.
- **Environmental Design Meeting Minutes**
  The minutes shall be included here for projects without a pre-preliminary phase.
- **High Performance Plan**
  -As defined in the DDC High Performance Building Guidelines for selected projects if not developed in the Pre-Preliminary phase.
- **Technical and Economic Evaluation**
  -Shall meet the DDC Design Criteria (Section I), and include necessary engineering design calculations.
- **Electrical**
  -Proposed foot-candle levels for all spaces, typical calculations, proposed power single line diagram, and indications for fire alarm and security systems.

- **Zoning Analysis**
  -And recommendations, including set-backs, height limitations, and required variances.
- **Building Code Compliance**
  -Demonstration of compliance with New York City Building Code, Building Classification and Construction Classification.
- **Schedule**
  The Consultant shall present a schedule for approval by DDC for the entire project duration. This includes, but is not limited to, a complete activities checklist with milestones, due dates for all submittals, and the construction duration.
- **Phasing**
  -Of construction.

12. Report Requirements

After the approval of Schematic Design six copies of the drawings of the selected scheme, with an additional half-sized set, and six copies of the report are required unless otherwise noted in the Specific Requirements or Task Order. Full size drawings shall be 24 x 36" unless otherwise approved by DDC.

13. Cost Estimate

A cost estimate in Construction Specification Institute format must be submitted for each Schematic Design alternative presented, indicating preferred scheme. For each item or combination of items in the cost estimate, identify the quantity required, the unit of measurement, the unit cost and the total cost. Provide a summation of construction cost for each trade in the estimate, as appropriate to the project. Include in the cost estimate general conditions at ten percent, overhead and profit at fifteen percent, and design contingency at ten percent. The Schematic Design cost estimate shall reflect the New York City Prevailing Wage Rates. Sales tax shall not be included in the estimate.

14. Project Fact Sheet

A project fact sheet with information including net and gross area, block and lot number, zoning district, Community Board, Council District and street address is required.

15. List of Long Lead Time Items

In consultation with the Client Agency representative, the DDC Project Manager and Team Leader, the Consultant shall prepare a preliminary list of anticipated long lead time items necessitated by the program and the project design.

16. Presentation Documents

Various presentation documents are required by the Art Commission, the Landmarks Preservation Commission and other regulatory agencies. The presentation boards, intended for regulatory review or for use at public meetings, may be retained by the Department of Design and Construction. In addition, presentation materials needed to resolve open design issues, including models and sketches, may be requested by the DDC Project Manager. Photographs of models and presentation boards will be submitted to DDC upon request.

17. Furniture and Equipment Drawings

For projects involving furniture and equipment, the Consultant is responsible for:

- **Preliminary Layout Drawings**
  The Consultant shall prepare preliminary furniture layout plans to illustrate a conceptual understanding of the function of each room as per Client Agency requirements and DDC Design Criteria. Layouts for systems furniture shall be prepared with manufacturer's

templates only. The plans shall incorporate all loose furniture, systems furniture, built-ins and equipment.

- **Anticipating Not-in-Contract (NIC) Items**
  The Client Agency is responsible for specifying and purchasing equipment such as photocopy machines, fax machines and computers. It is the responsibility of the Consultant, however, to verify that all such equipment fits within the designated space, and to provide for electrical and telephone service, and any other physical need for the operation of these items.
- **Procurement Procedures**
  The Consultant shall meet with the DDC Project Manager to discuss the procurement process of the Department of Citywide Administrative Services. Considerations include requirement contracts, vendor requirements, specifications, procurement forms and the bidding process

18. High Performance Pilot Projects

Selected High Performance projects shall conform to the requirements of the High Performance Plan developed at the outset of the design process.

19. Design Review Comments Response

The Consultant is required to respond, in writing (electronic mail is acceptable), to comments from the technical review groups of the DDC. Response should be within two weeks, complete, and shall address the spirit of the comment as well as the specific issues.

IV. DESIGN DEVELOPMENT

IV. DESIGN DEVELOPMENT

A DESIGN DEVELOPMENT SERVICES

The Preliminary Design phase consists of two sub-phases; Schematic Design and Design Development. During Design Development the selected scheme is developed in detail to establish the validity and constructability of the Schematic Design. Drawings must be coordinated between disciplines and organized according to multi-prime construction contracts. They must include developed site plans, floor plans, elevations, building and wall sections, material selections and finishes. Outline Specifications and a Cost Estimate shall be included. At the end of Design Development all design decisions are made final. A presentation meeting attended by the Design Review Team, the Client Representative and Subconsultants, if necessary, shall be conducted by the Consultant to resolve any disputes arising from the design review process. Design Development services include:

1. Design Development Kick-Off Meeting

A meeting of the Consultant, Client Agency representative, DDC Project Manager and Team Leader and other team members, as required, shall be held at the start of Design Development. All project requirements shall be reviewed.

2. Plans and other Drawings

During Design Development the Consultant shall prepare the following documents or analyses:

- **Key plan**
- **Site plan, including plantings, pavings, site furnishings and grading**
- **Foundation type analysis and plan**
- **Zoning and Building Code analysis**
- **Floor plans including basement, all occupied floors and roof**
- **Elevations**
- **Sections indicating types of structural framing and building materials**
- **Typical roof and wall sections**
- **Proposed floor-to-floor heights**
- **Utility layouts**
- **Materials selection**
- **Furnishing selection**
- **Elevator types**
- **Mechanical systems and equipment**
- **Plumbing systems and riser diagrams**
- **Typical lighting layouts**
- **Electrical systems and equipment**
- **Additional documents listed in the Specific Requirements or Task Order**

3. Design Review

The Consultant shall submit documents for design review by the Department of Design and Construction, the Client Agency and the appropriate regulatory agencies.

4. Progress Meetings

The Consultant shall attend, participate and make submittals at progress meetings to be scheduled by the DDC Project Manager. These meetings shall be recorded by the Consultant in Meeting Minutes.

5. Budget Estimates

The Consultant shall monitor costs during Design Development and re-design, if necessary, to stay within the budget.

6. Cost Estimating

The requirements are similar to those for the Schematic Design phase and are more fully described in the Design Development deliverables section.

7. Hazardous Materials Survey

On jobs on which DDC's Environmental Health and Safety Services (EHSS) team is not handling hazardous materials, the Consultant shall identify hazardous materials that may be affected by the proposed work and shall prepare a report.

8. Multiple Construction Contracts

The Consultant shall verify with the DDC Project Manager the establishment of separate contracts. Adherence to the Wick's Law requires that the Consultant prepare drawings and specifications for four prime contracts. Exceptions may result and fewer contracts be prepared when there is limited work in one of the prime trades. The drawings and specifications shall typically be organized as follows:

- **Contract No. 1**
  -General Construction Work, including site work and elevators.
- **Contract No. 2**
  -Plumbing Work, including standpipe system, if required.
- **Contract No. 3**
  -Heating, Ventilating, Air Conditioning, and Fire Protection Work, including sprinkler systems, as well as combined standpipe system, if required. The sprinkler system work, which is part of the HVAC/Fire Protection Contract, shall be shown and detailed on drawings separate from all other work within that Contract.
- **Contract No. 4**
  -Electrical Work.
- **Other Contracts**
  -May include, if necessary, separate packages for such specialties as curtainwall and foundations.

9. Specification Format

Strict adherence to the Construction Specification Institute (CSI) format is required. The Consultant shall submit Outline Specifications indicating all elements of construction, including General Construction, Plumbing, HVAC/Fire Protection and Electrical items.

10. Presentation and Acceptance

The Consultant shall make a presentation of Design Development materials to the Department of Design and Construction and the Client Agency. Public presentations may be required. The Consultant shall coordinate with the DDC Project Manager concerning all materials and information to be included in the presentation documents.

11. Area Calculations

Area calculations and calculations of building volume shall be prepared in accordance with the DDC definitions of net and gross area below and be tabulated floor-by-floor for each space. Net square feet, gross square feet, floor-to-floor height and gross cubic feet shall be indicated for each program space and subtotaled for each floor. Building totals shall also be included for each category.

- **Gross Area**
  Gross area is measured to the outside of the building walls, in square feet.
- **Net Area**
  Net area is the cumulative usable space within the partitions of each programmatic area required for project functions. Not included are access and service spaces, shafts, wall thicknesses and structural elements.

12. Percent for Art

For accepted eligible projects the Consultant participates in:

- **Artist Selection**
  If the agencies involved determine that the project is eligible, and the project is accepted for participation in the Percent for Art Program, an Artist will usually have been selected during the Schematic Design phase. On occasion the selection occurs during Design Development. The Architect participates as an active non-voting member of the Percent for Art project panel.
- **Integration of Artwork**
  During Design Development the Artist and Architect shall work together to integrate the artwork into the building design.
- **Artist Contract and Payments**
  The Artist will enter into a contract with the Consultant, who will coordinate with the Artist as the artwork develops. The Contract will outline the responsibilities of Artist and Architect as well as the payment schedule. The Architect will assure and expedite payments, including partial payments, to the Artist as verified by DDC. Payments shall be made to the Artist not more than 60 days following acceptable invoice from Artist to Architect.
- **Community Planning Board**
  The Artist is required to present artwork to the Community Planning Board prior to going to the Art Commission. The scheduling of such presentation will be coordinated by the DDC Project Manager. Background information about the building or site project shall be made available by the Consultant for such Community Planning Board meetings.

13. Approvals to Proceed

The Consultant shall obtain written approval to proceed from the Department of Design and Construction and the Client Agency at the end of Design Development before proceeding with Final Design.

B DESIGN DEVELOPMENT DELIVERABLES

Deliverables for Design Development shall meet the requirements of the DDC Design Criteria (Section I) and shall be organized in accordance with DDC requirements for Multiple Construction Contracts. The Consultant shall submit documents for design review by DDC, the Client Agency and all regulatory agencies. Design Development deliverables include the following:

1. Progress Meeting Minutes

The Consultant shall prepare Minutes, following the DDC format, within three working days of Progress Meetings. Criteria for these minutes appear in Section IX under "Meetings." The Consultant shall distribute Minutes to all attendees.

Minutes summarize:

- **Decisions Made**
  -And by whom they are made.
- **Open Issues**
  -The persons responsible and the schedule for resolution.

2. Design Development Submission

- **Letter of Transmittal**
  -With signatures of Consultants, includes a description of the building and site with comments and description of significant design features. The letter of transmittal shall explain and reconcile any differences between the scope of work described in the Specific Requirements or Task Order and the submitted design.
- **Cover sheets**
  -Front and back with continuous binder.
- **Title sheet**
  -Information and content format may vary from DDC standard if approved by the DDC Project Manager.
- **Table of Contents**
  -With page numbers.
- **Prints of all Drawings**
- **Outline Specifications**
- **Cost Estimate**
- **Project Fact Sheet**
- **Rendering or Perspective**
  -Or photographs of renderings and models, when required by the Specific Requirements or Task Order.
- **Drawing Requirements**
  Six copies of the drawings of the scheme, with an additional half-sized set, and six copies of other documents are required unless otherwise noted in the Specific Requirements or Task Order. Full size drawings shall be 24 x 36" unless otherwise approved by DDC.

3. Indications

Indications on each drawing, as relevant, including:

- **Title block**
  -For information and content, see DDC Drawing Standard. Variations on the title block format shall be as approved by the DDC Project Manager.
- **Scale**
  -Shall be 1/4" = 1'-0", unless otherwise approved by the DDC Project Manager. A graphic scale shall be included.

- **North Arrow**
  -On all plans.
- **Key Plan**
  -Showing location and orientation.

4. Architectural Floor Plans

The design concept must be fully developed. The architectural floor plans shall include:

- **Scale**
  -Shall be 1/4" = 1'-0", unless otherwise approved by the DDC Project Manager.
- **Net and gross**
  -Design area tabulations.
- **Dimensions**
  -Including room sizes and room areas.
- **Building Lines**
  -And column indication grids.
- **Functional Units**
  -As programmed in the Specific Requirements or Task Order, or as approved in the Pre-Preliminary or Schematic Design Phase.
- **Material Indications**
  -As per conventional graphic standards indicating all new construction.
- **Furniture and Equipment**
  If the fixed and movable furniture, fixtures and equipment are not in contract, the Consultant shall nonetheless show the general layout to demonstrate the use and scale of the space as well as the selection, if any, of upholstery color and frame finish.
- **Finished Floor Elevations**
  -In plans and sections and at every location where the floor elevation changes, such as at the top and bottom of stairs, landings and ramps. Floor elevations shall also be indicated for the floor level in general.
- **Artwork**
  -Integration of sculpture or other artwork.
- **Fire Ratings**
  -Of walls, partitions, ceilings, shafts, roofs and structural elements such as columns and slabs.

5. Architectural Reflected Ceiling Plans

Architectural reflected ceiling plans shall be printed in half-tone on mylar from the architectural base plan prior to adding the following information:

- **Light fixtures**
  -Including all ceiling fixtures and wall sconces.
- **Air Supply and Return Grilles**
  -If required.
- **Sprinkler Heads**
  -If required.
- **Ceiling Heights**
  -Including all differences in ceiling heights.
- **Smoke Detectors**
  -If required.
- **Materials**
  -Of ceiling surfaces.

- **Keying-in**
  -Of building sections.

6. Architectural Exterior Elevations and Building Sections

Architectural exterior elevations, building sections, and interior elevations shall include:

- **Exterior Elevations**
  -Of all vertical surfaces exposed to the exterior.
- **Building Sections**
  -Longitudinal and transverse building sections.
- **Scale**
  -Shall be 1/8" = 1'-0", unless otherwise approved by the DDC Project Manager.
- **Site Features**
  -Such as trees, artwork and adjacent structures.
- **Materials**
  -Noted on the elevations and indicated on the building sections.
- **Finish Floor Elevations**
  -On sections and elevations, coordinated with elevations on plans.
- **Floor-to-Floor Heights**
  -On building sections.
- **Finished Grades**
  -On all exterior elevations and building sections, coordinated with the site plan.

7. Detailed Wall Sections

Detailed wall sections shall indicate typical wall assemblies, complete in all details.

8. Interior Elevations

Interior elevations or perspectives and axonometric illustrations shall include:

- **Interior Elevations**
  -Developed, if requested, into one-point perspective sketches, to illustrate how all the elements and surfaces are coordinated, and how the ceiling, floor and walls interface.
- **Axonometric Illustrations**
  If requested, axonometric illustrations will detail sections through complicated connections and material intersections.
- **Materials**
  -All materials including trim, window treatment, air registers, light switches, textures and colors.
- **Furniture**
  -All furniture and equipment in the proper location, size and shape, as per vendor specifications. Add human figures to illustrate proportions and appropriateness of scale. If furniture and equipment items are not-in-contract, show general layout only.
- **Room Designations**
  -In all spaces with room names and numbers.
- **Vertical Dimensions**
  -Floor elevations and floor-to-ceiling heights.

9. Landscape Architecture Drawings

Landscape Architecture drawings and urban design and site development plans, indicating:

- **Surveys**
  Submission shall include a current Topographic and Boring Survey based on the approved boring plan generated by the consultant.

- **Layout Drawing**
  -Shall describe entire site within the property lines, as well as sidewalks and other access ways outside of the lot lines as established by DDC. It shall be based on a surveyed point of beginning.
- **Engineering Scale**
  -Shall be 1' = 20'-0", unless otherwise approved by the DDC Project Manager. A graphic scale shall be included and a North arrow in plan views.
- **Site Removals**
  -And demolition plan identifying materials for recycling. If the project site is within the most current NYSDAM quarantine area for the Asian Longhorn Beetle, any previously-identified host plant species slated for pruning or removal must be marked. In this case, the removals and demolition plan must include a coordinated note that clearly outlines the disposal protocols mandated by the NY State Department of Agriculture Markets (NYSDAM).
- **Exterior Paving**
  -Including sidewalks, driveways, yards, curbs and curb cuts.
- **Adjoining Structures**
  -Including retaining walls, fences, railings, gates and number of stories.
- **Landscaping**
  -Including plantings and street trees. When street trees are set in pavement include pits, rings, guards, ground cover and planting.
- **Grades**
  -To show the surface flow characteristics of the site. Show existing and new grade elevations and land contours, at appropriate intervals, at the building and around the site. Elevations shall be given in feet and decimals to the nearest 1/100th. If appropriate, use spot grades at entrances, surrounding property lines, walls, stairs, drain inlets and major changes in site slope.
- **New and Existing Buildings**
  - Only indicate number of stories, clearance from building lines, finish floor elevations, building footprint, and overhangs.
- **Encroachments on Site**
  -And all easements.
- **Elevations of Adjoining Buildings**
  -And foundations.
- **Utilities**
  Show all basic surface and subsurface utilities, including drainage, lighting, traffic, electrical, water, irrigation, site utility systems, equipment, fixtures, controllers and subsurface structures.
- **Legend and General Notes**
  -As required.
- **Zoning Data**
  -Including diagrammatic resolution of requirements.
- **Historic District**
  -Location within designated historic district, if applicable.
- **Artwork**
  -Integration of sculpture and other approved artwork if applicable.
- **Planting List**
  -A full planting list with Latin botanical names, common names, sizes and root containment types, assets and constraints. This plant schedule must be in compliance with the most current recommendations from NYSDAM and NYCDPR on the use of Asian Longhorn Beetle host species.

- **Outline Specifications**
  -Of all materials and any specialized processes.
- **Details**
  Provide all proposed site-related details, including site-related structures and furnishings, their footings, foundations and reinforcement. Include pertinent drainage structures, pavements, lighting, signage, hardware and other relevant materials, and all dimensions and finishes.
- **Catalogue Cuts**
  Provide catalogue cuts of manufactured site products.
- **Sections and Elevations**
  -Of such key elements as fences, walls, gates, site furnishings, and significant new plantings. These must be coordinated with the appropriate architectural drawings. Buildings shall be represented only with their volumes, windows, doors and no details unnecessary to site design.
- **Builders Pavement Plan**
  -If required, shall be initiated at this phase.

10. Structural Engineering Drawings

Structural drawings indicating the following:

- **Design Criteria**
  -Including applicable codes, soil bearing values and pile capacities. Requirements may be not covered or more stringent than code.
- **Preliminary Structural Design Calculations**
- **Material Characteristics**
  -Including strength of concrete, grades of steel and piling materials.
- **Loading Schedules**
  -Including live loads and special loads.
- **Foundation Plan**
  -Typical details and footing schedule.
- **Adjoining Structures**
  -Support of adjoining structures.
- **Floor Framing Plans**
  -Including first floor, typical floors and roof framing plans.
- **Rehabilitation Projects**
  -Separate structural framing plan and detail drawings for rehabilitation projects.
- **Sections**
  -Showing size and connection of structural members.
- **Typical Details**
  -For slab and spandrels.
- **Fireproofing**
  -Show method of fireproofing.
- **Waterproofing**
  -Show extent of waterproofing.

11. Plumbing Engineering Drawings

Plumbing drawings indicating the following:

- **Outside Services**
  -To the building.
- **Related Appurtenances**
  -Such as catch basins, inlets and manholes.

- **Riser Diagrams**
  -For the various systems.
- **Plumbing Equipment**
  -Location of all plumbing equipment including fixtures, tanks, sewage ejectors, sump pumps, meters, backflow preventers, hose bibbs and hydrants.
- **Various Systems Used**
  -Piping material and related equipment.
- **Roof and Site Drainage**
  -And all related piping and drains.
- **Calculations**

12. HVAC and Fire Protection Engineering Drawings

HVAC/Fire Protection drawings indicating the following:

- **Type, Capacities and Zoning**
  -Of all the HVAC, fire protection and other special systems.
- **Location and Layout of Equipment**
  -Of all major pieces of equipment and all equipment room layouts. Block equipment layout is acceptable.
- **Riser and Flow Diagrams**
  -Preliminary air, water and steam riser diagrams; preliminary flow diagrams for new systems and existing systems being modified.
- **Diagrammatic Plans**
  -Single line plans for major ductwork and piping runs, with preliminary sizes indicated.
- **All Ductwork and Vertical Risers**
  -Shafts, stacks and chimneys.
- **Calculations**
  -Heating and cooling load calculations, summary of loads and a breakdown of individual peak space loads and ventilation loads, a summary of simultaneous peak loads for equipment selection, preliminary hydraulic, pump sizing and water reserve calculations for sprinkler systems.
- **Design Temperatures and Percent Humidity**
  -To be maintained in each space.

13. Electrical Engineering Drawings

Electrical drawings indicating the following:

- **Electric Service Room**
  -Plan and elevation of service entrance equipment and other electrical equipment such as panel boards and fused switches.
- **Room Designations**
  -In all spaces, using the same names, room numbers and column designations indicated on the architectural drawings.
- **Site Plan**
  -Location of electrical service room, telephone service, property lines, manholes, handholes, duct banks for power, telephone, cable television. Coordinate electric service room location and anticipated points of entry.
- **Floor Plans**
  -Lighting layouts of typical rooms and spaces; power distribution routing and receptacle layouts of typical rooms and spaces; low voltage systems device layout of typical rooms and spaces, and locations of telephone service room, telephone closets, electrical closets, telephone panels, motor control centers and panel boards.

- **Single Line Plan** and Riser Diagram
  -Diagrammatic plan of electric service and power distribution.
- **Riser Diagrams**
  -Of fire alarm, intercom and security systems.
- **Foot-Candles**
  -Separate foot-candle calculations for all rooms.
- **Motor**
  -And electric equipment locations.
- **Typical Power Wiring**
  -Lighting, wiring and controls.
- **Pertinent Design Calculations**
- **Site Lighting**
  -And site electrical outlet systems, iso foot-candle curves.
- **Calculations**
  -Lighting, power and equipment summary.

14. Elevator Drawings

- **Key Plans**
  -Indicating all areas of work.
- **Floor Plan**
  -Of elevator machine room showing all elevator control equipment, power equipment, mechanical equipment.
- **Lobby**
  -And machine room plans showing smoke detectors.
- **Elevator**
  -Solid state microprocessor controller.
- **Riser Diagram**
  -Indicating elevator installation, floors covered, elevator travel, and openings.
- **Elevations and Sections**
  -Of elevator car.
- **Sketches**
  -For car controls such as hall buttons.
- **ADA**
  -Comply with ADA handicapped accessibility and control requirements.

15. Interior Design Drawings

Interior Design drawings indicating the following:

- **Floor Plans**
  -Fully dimensioned with component systems and furniture layouts.
- **Vendors' Component Systems Plans**
  -Complete component system documents, showing information needed by vendors for ordering and installation.
- **Telephone Layout**
- **Computer Layout**
- **Laboratory Equipment**
- **Kitchen Equipment**
- **Individual Room Plans**

- **Presentation Boards**
  Self-explanatory presentation boards are required at the end of Design Development. Each space needs to have a plan and a color rendered interior elevation, or an interior elevation developed into a one point perspective to show how materials go around corners. These boards shall show all significant materials and finishes. Include catalogue cuts of the light fixtures, grille-work, window treatment, plumbing fixtures and trim, hardware, kick plates, push plates, and all colors, keyed to plans and elevations, with a written explanation of the concept and rationale of the chosen scheme.
- **Presentation Meeting**
  The Consultant shall make a formal presentation to the Client Agency, the DDC Project Manager and Team Leader at the Department of Design and Construction offices. Three sets of color photocopies in 11" x 17" format shall accompany the presentation. Interior perspectives are encouraged.

16. Furniture and Equipment

Design Development deliverables for Furniture and Equipment include:

- **Furniture Layouts**
  The Consultant is responsible for further development of the design, documented in the furniture plans.
- **Selection**
  The Consultant is responsible for selection of furniture to be purchased through Requirements Contracts held by the Department of Citywide Administrative Services unless otherwise directed in the Specific Requirements or Task Order or unless so directed by the DDC Project Manager.
- **Resolution of Design Issues**
  The DDC Project Manager shall clarify any outstanding issues the Consultant may have in the design, program and budget.
- **Furniture Specification Book**
  The Consultant is responsible for providing a furniture specifications book, which will be separated into three categories: "Requirements Contract Furniture", "Items for Public Bidding" and "Inventoried Furniture and Equipment to be Re-Used."
- **Illustrations**
  The specifications book will contain furniture catalogue cuts, specifications, literature and photographs for all items in each category.
- **Furniture Cost Estimate**
  The Consultant shall provide a preliminary cost estimate for all furniture. The estimate shall identify the vendor, item description, order number, quantity and the costs. The estimate shall also be divided into the same three categories: "Requirements Contract Furniture", "Items for Public Bidding" and "Inventoried Furniture and Equipment to be Re-Used."

17. Hazardous Materials Survey Documents

The Consultant shall provide an environmental survey and report with the following information:

- **Accessible Hazards:**
  A preliminary survey of the project site must note existing environmental conditions and properly define the limits of accessible suspect hazards that may be disturbed, altered, demolished or affected by the proposed work. Such environmental hazards may include, but are not limited to, asbestos building materials, lead-containing paints, PCBs from electrical transformers, underground storage tanks and similar conditions.

- **Inaccessible Hazards**
  -Identification and location of any inaccessible suspect hazards and arranging for exploratory probes, physical penetrations, sample collection and analytical tests to determine whether suspect hazards are present within the boundaries of the scope of work.
- **Assessment**
  -A comprehensive environmental survey and hazard assessment, with a subsequent formal report, to determine the presence and location of hazards in materials and/or environmental conditions. The survey report will document the materials and conditions found and expected to be impacted by the scope of construction. The report shall, minimally, include the following information:
  - **Services**
    -A brief discussion of the services provided.
  - **Inventory**
    -An inventory of environmental hazards including, but not limited to, asbestos, lead, soil contamination, PCBs, mold and biological hazards and/or similar environmental concerns.
  - **Assessment with Costs**
    -A written assessment of all hazards including cost of abatement or remedial work.
  - **Drawings**
    -Sketches showing the approximate locations where samples were collected.
  - **Amounts**
    -An estimate of the quantities and conditions of the hazards identified in the survey.
  - **Summary**
    -A summary of all samples, analyses, chain of custody and laboratory certifications.
  - **Diagrams**
    -Photographs, sketches, drawings, etc as necessary to document the condition.

18. Outline Specifications

Outline Specifications shall provide a written description of the materials and systems proposed for the project, in narrative format, to further explain the design intent. The Outline Specification at the Design Development phase shall be a comprehensive materials and systems description in agreement with the Preliminary Design drawings. Outline format is required. Specifications shall incorporate requirements for construction and demolition waste management, high recycled content and low toxicity materials. Commissioning specification shall be included where agent is used.

- **Coordination**
  Outline Specifications shall be coordinated with the drawings.
- **Format**
  Outline Specifications shall be divided into CSI Format divisions and sections, with the exception of Division 15, which shall have a suffix added to differentiate between Plumbing Work and Heating, Ventilating and Air Conditioning Work. Affix a "P" to all Plumbing sections, and a "H" to all Heating, Ventilating and Air Conditioning sections.
- **Identification of Outline Specification**
  Outline Specifications shall be given a name and number for each trade and material.
- **Listing in the Table of Contents**
  Outline Specifications shall be listed in a Table of Contents, organized by Contract, with each division and its related sections listed with page numbers. The latest revision date shall appear as a footer on each page.

- **Reference Standards**
  Reference standards and quality assurance provisions are not required at this stage, but shall be required in the final Technical Specifications.
- **Draft Final Specifications**
  Submittal of a draft of the Final Technical Specifications is not the intent of the Outline Specification requirement. A concise outline format is required.

19. Detailed Cost Estimate

The detailed cost estimate at the conclusion of Design Development conforms to standards described in Section III and also includes:

- **List of Project Parameters**
- **Reconciliation**
  -Cost differences between Schematic Design and Design Development.
- **Break-Out and Itemize Project Elements**
  For each specification section, break out and itemize project elements in detail, by CSI code of account numbers, for example:
  CSI 4221.25 Concrete Masonry Units - 4",8" &12" units and special shapes
  CSI 5110.10 Structural Steel - w10x12
  CSI 16120.10 Electrical Wiring - THHN #8, THHN #12

20. Detailed Energy Analysis

This analysis shall show compliance with the New York State Energy Conservation Code.

21. Renderings

The Consultant shall submit, if required by the Specific Requirements or Task Order, perspective renderings suitable for photographic reproduction and other presentation materials based on the developed design. These renderings and other presentation materials shall belong to the Department of Design and Construction and shall be used at public meetings, for internal publication and on the DDC website without additional permission or release from the Consultant. Publication in journals or periodicals may require formal release of rights on the part of the Consultant, permission for which shall be secured in advance by the supplied signed release form.

- **Identification**
  Renderings shall be titled with the name of the project, the name of the Client Agency and the Department of Design and Construction, Division of Structures.
- **Format**
  Renderings shall be matted and framed, using a 1-1/4" wide simple molded birch or metal frame of appropriate strength, glazed with non-reflective glass and wired for ease of hanging.
- **Photographs**
  Renderings shall be accompanied by four-color photographs measuring 8" x 10" of each image, suitable for reproduction. Digital files are also required and may be transmitted electronically.
- **Release Form**
  A signed release form shall accompany all renderings and photographs.

22. Models

A presentation model is required for all new buildings and additions with estimated construction value of one million dollars or more.

- **Complete**
  Models shall be complete in scope, detail and color selection.

- **Cover**
  A clear plastic dust cover shall be provided and firmly attached.
- **Base**
  Models shall be accompanied by painted white wooden bases four feet high.
- **Identification**
  Models shall be titled with the names of the project, the Consultant, the Client Agency and the Department of Design and Construction.
- **Delivery**
  Models and bases shall be delivered to the Department of Design and Construction.

23. Material Boards

- **Exterior Materials**
  -As required by DDC and the Art Commission, and, if applicable, by the Landmarks Preservation Commission. Boards shall clearly show the relation of all new and existing exterior materials and finishes.
- **Interior Materials**
  -As required by DDC and, if applicable, by the Landmarks Preservation Commission. Boards shall clearly show the relation of all new and existing interior materials and finishes.

24. High Performance Pilot Projects

Selected projects shall conform to the requirements of the DDC High Performance Plan developed at the outset of the design process.

25. Peer Review

Selected projects shall be designated during Design Development for presentation by the Consultant to the Commissioner in a "Peer Review" meeting. Appropriate materials shall be required to explain the project design.

26. Design Review Comments Response

The Consultant is required to respond, in writing (electronic mail is acceptable), to comments from the technical review groups of the DDC and from the DDC-hired Commissioning Agent where agent is used. Response should be within two weeks, complete, and shall address the spirit of the comment as well as the specific issues.

V. FINAL DESIGN

A FINAL DESIGN SERVICES

Final construction documents, including drawings and specifications, are prepared during this phase. For regulatory approval and public bidding, construction documents have to be completely coordinated, checked and cross-checked. Keeping Construction Change Orders to a minimum is a primary responsibility of the Consultant. A detailed final Cost Estimate is required. Comprehensiveness and constructability are key to the Consultant's successful completion of Final Design and DDC acceptance for construction. Final Design services include:

1. Final Design Kick-Off Meeting

A Final Design Kick-off meeting of the Consultant, the Client Agency representative, DDC Project Manager and Team Leader and other required team members shall be held at the start of Final Design. All project requirements shall be reviewed, including:

- **Project Schedule**
  -Review the updated project schedule.
- **Project Decisions**
  -Review all significant project decisions.
- **Review Resolutions of the Preliminary Design**
  -Assure that all parties clearly understand the resolution of issues as indicated by the approved Preliminary Design documents, so that Final Design may proceed.

2. Existing Conditions

The Consultant shall review and verify the existing conditions.

3. Construction Documents

The Construction Documents shall include:

- **Drawings and Specifications**
  The drawings and specifications shall contain all pertinent information necessary to fulfill the stipulations of the Specific Requirements or Task Order. They shall be prepared with construction details completely shown and dimensions given. Specifications shall be completely stated so as to enable prospective bidders to make accurate and reliable estimates of the quantities, quality, and character of the labor and materials required to complete the project and to install project equipment in a first class manner. When preparing DDC specifications, list a minimum of three manufacturers, and include "or approved equal." The Consultant shall write performance specifications describing the salient characteristics of the product for each item specified. All pre-qualification requirements for the Contractor, Subcontractor and manufacturer will need to be approved by DDC prior to the final submission. The Consultant shall suggest to the DDC Project Manager all areas where pre-qualification requirements are advisable for the project.
- **Fixed in Place Equipment**
  The equipment called for in the Contract Documents shall include fixtures or appliances that will become a fixed part of the project and are essential to render the project fit for the use intended.
- **Movable Equipment and Furniture**
  The Consultant shall plan and provide for adequate and proper space for movable equipment and furniture, as called for in the Specific Requirements or Task Order.
- **Cost Estimate**
  A detailed cost estimate for each prime Contract is required in CSI format. Requirements are the same as for the Design Development Cost Estimate, except that there shall be no design contingency indicated in the Final Estimate. The Consultant shall inform the DDC Project Manager, in writing, of any adjustments to the last approved estimate of the total

construction cost of the project. The Consultant shall modify the design to comply with budget limitations.

- **Tabulations of Gross and Net Area**
  Gross area is defined as the area of all floors, measured to the outside of the building walls, in square feet. Net area is the cumulative usable space within the partitions of each programmatic area required for project functions. Not included are access and service spaces, shafts, wall thickness and structural elements.
- **Construction Schedule**
  When the project has arrived at 75% final design the schedule shall be submitted to DDC for approval.
- **Proposal for Bids**
  The Consultant shall prepare all forms and data necessary for the preparation of a proposal for bids, or a construction Requirement Contract task order, in a manner satisfactory to DDC.

4. Hazardous Materials Construction Documents

The Consultant shall prepare hazardous materials construction documents including plans and specifications, procedures and protocols, phasing plans, regulatory filings and a cost estimate.

5. Approvals Required

All final drawings submitted to DDC for final acceptance shall bear the stamps of approval and be accompanied by all necessary applications, certificates, or permits of all utilities and New York City, New York State and Federal Agencies having jurisdiction over any phase of the work, including the NYC Department of Buildings. Where approvals have been received and changes were subsequently made affecting the work covered by the approvals, the Consultant shall resubmit and receive approval for the revised work.

6. Preparation of Separate Contracts

- **Final Determination of Separate Contracts**
  A final determination of separate contracts appropriate for the project shall be made by DDC prior to the start of Final Design.
- **Separate Drawings and Specifications**
  The Consultant shall prepare separate drawings and specifications to permit the award of separate contracts for General Construction, Plumbing, HVAC/Fire Protection and Electrical work.
- **Additional Separate Contract Documents**
  Additional separate Contract Documents may be required when necessitated by the particular requirements and staging of the project for demolition, elevators, escalators, equipment, excavation, foundation work and other special items of work.
- **Sprinkler System Work**
  The sprinkler system work, which is part of the HVAC/Fire Protection Contract, shall be shown and detailed on drawings separate from all other work within that Contract.
- **Coordination**
  All Contract Documents shall be properly coordinated so as to preclude changes, adjustments or extra work orders during construction.
- **Fast-Track or Design/Build Projects**
  Fast track, CM/Build or Design/Build projects may require the preparation of multiple separate bid packages. Coordination of documents remains the highest priority.

7. Coordination

- **Coordination of Architectural and Engineering Disciplines**
  It shall be the responsibility of the Consultant to coordinate the design of the architectural, structural, plumbing, furniture, equipment, HVAC/Fire protection and electrical work, so that interference between the trades can be avoided.
- **Composite Sections**
  The Consultant shall prepare composite sections, drawn to scale, showing the work of all trades in equipment rooms, corridors and all other areas involving the work of more than one trade. These sections shall indicate whether equipment is to be hung from above or supported from below. Composite drawings shall be included as part of the Contract Documents for each trade in addition to the regular drawings with their own details and sections. The work of each trade and in each Contract shall be clearly labeled to avoid confusion during the bid and construction processes.
- **Interference Caused by Inadequate Design or Coordination**
  Any interference between trades caused by inadequate design or coordination of the Contract Documents will be the responsibility of the Consultant. The Consultant will be required to prepare, at no extra cost to the City, addenda or supplemental drawings necessary to resolve any conflict found prior to or during the bid period or during construction. The means for resolving the conflict(s) shall be approved by DDC.

8. High Performance Pilot Projects

Selected projects shall conform to the requirements of the DDC High Performance Plan developed at the outset of the design process.

9. Proprietary Items and Systems

Contract Documents shall contain no proprietary systems or products without written approval from DDC. When written approval is issued the selected manufacturer shall issue an affidavit, stating the unit price cost of the single-source item, and the period of time that the unit price will hold. The affidavit shall be included in the specifications at the discretion of the DDC Project Manager. All submissions and justifications are to be prepared by the Consultant. The use of proprietary items is strongly discouraged and will only be approved by DDC under exceptional circumstances.

10. List of Shop Drawings

Contract Documents shall contain a list of all shop drawings, identified by the Consultant, for each Contract pertinent to the project. The shop drawing log shall also list all required samples, data sheets and catalogue cuts. These lists of shop drawings shall be incorporated into the Consultant-prepared Addendum to the DDC boilerplate General Conditions in the contract specifications. Identifying information shall include specification reference number, verbal description of the shop drawings and listing of appropriate contracts with which they must be coordinated. The Consultant shall also submit these lists on the Shop Drawing Log for presentation to the Contractor at the Construction Kick-Off Meeting.

11. Pre-Construction Strategy Site Meeting

This meeting occurs at 75% Final Design. In conjunction with the 75% submission of Final Design drawings, a Construction Strategy Meeting shall be scheduled by the DDC Project Manager and conducted at the site.

- **Site Conditions**
  The Construction Strategy Meeting takes place on site so as to insure that the Contract Documents to be issued for bids thoroughly and accurately reflect all site conditions.

- **Progress Items**
  Issues to be addressed at the Construction Strategy Meeting include progress made on regulatory approvals, resolution of previous design issues, construction planning and phasing, and Consultant recommendations on areas where Contractor Special Experience Requirements should be requested.
- **Attendees**
  Attendees include the Consultant, appropriate Subconsultants, Client Agency representative, DDC Project Manager, DDC Team Leader, members of the Subconsultant constructability review team, and the DDC Hazardous Materials Unit.
- **Final Site Visit**
  When the 75% Final Design site visit occurs earlier than ninety days prior to the submittal of the Final Design drawings and specifications for bidding, the DDC Project Manager may elect to have a final site visit approximately thirty days before the Bid Documents are due.
- **Additional Items to Verify**
  Additional items to verify during the Construction Strategy Meeting and at the final site visit include:
  - **Tenants on-site**
  - **Conditions that would affect construction of the project**
  - **Ongoing operational and service requirements, if the site is occupied**
  - **Locations for storage of materials, field offices and other support functions**
  - **Conditions involving demolition or deterioration of existing elements**
  - **Existing utility services**
  - **Work requirements needed for the operation of existing building functions**
  - **Phasing and access to the facility**

12. Final Design Procedures

Final Design responsibilities include:

- **Submittals and Reviews**
  The Consultant is responsible for submittals and reviews, which shall be based on Contract service time and Consultant's approved schedule.
- **Approvals from Utilities and Regulatory Agencies**
  The Consultant shall make submittals to and obtain approvals from all appropriate utilities and regulatory agencies.
- **Resolution of Questions**
  The Consultant shall work closely with DDC and the Client Agency to resolve questions as they arise throughout preparation of the Final Documents.
- **Attendance at Project Meetings**
  The Consultant shall attend, participate and make submittals at progress meetings to be scheduled by the DDC Project Manager. These meetings shall be recorded by the Consultant in Meeting Minutes. Criteria for Minutes are reviewed in Section IX under "Meetings."
- **Review Project Status Report**
  The Consultant shall attend a meeting called by the DDC Project Manager at completion of 75% of Final Design to review the Consultant's Project Status Report. This report shall include the status of all agency submittals and approvals.

13. Constructability Review

Unless the Commissioner determines otherwise, a constructability review of the Final Design documents for all projects with an estimated construction cost of more than $250,000 is to be performed by a Construction Manager engaged by the Design Consultant. This review will help

achieve a design that uses appropriate construction materials and systems. It will facilitate the production of contract documents, including technical specifications, that are clear, coordinated and complete.

- **Design Review**
  The Construction Manager is brought in at 75% Final Design to become familiar with the project, will attend the Pre-Construction Strategy Meeting, and reviews the 100% final plans, specifications, bid booklet, and the Addendum to the General Conditions. The Construction Manager also reviews the Consultant's final estimate. As part of its review, the Construction Manager shall recommend directly to the DDC Project Manager changes in the work that it considers necessary or desirable. The Construction Manager's review comments will be given to both the DDC Project Manager and the Consultant; the Consultant shall revise the documents to reflect the comments or explain in writing why a revision should not be done.
- **Construction Schedule**
  The Construction Manager shall assist the Consultant in determining durations and sequences in the construction schedule, in consultation with the DDC Project Manager and the Client Agency representative.

14. Acceptance

Documents shall not be considered approved until the Department of Design and Construction has notified the Consultant in writing.

B 75% FINAL DESIGN DELIVERABLES

1. Progress Meeting Minutes

The Consultant shall prepare Minutes, following the DDC format, within three working days of Progress Meetings. The Consultant shall distribute Minutes to all attendees.
Minutes summarize:

- **Decisions Made – and by whom they are made**
- **Open Issues – the persons responsible and the schedule for resolution**

2. Regulatory Approvals

At this stage of the project all submissions to utility companies and regulatory agencies should be completed. The Consultant shall submit a status report on all required submittals to the DDC Project Manager showing actual submittal dates, approvals received and any unresolved issues.

3. Drawings and Specifications

All required submissions including Architectural, Landscaping and the Engineering disciplines shall show a minimum of seventy-five percent completion and shall meet the following requirements:

- **Architectural and Engineering Drawings**
  -Shall clearly indicate separation of contract work among the various prime contracts. Drawings shall use appropriate drafting scales and include symbols, legends and abbreviations.
- **Drawing and Specification Submission Requirements**
  Six copies of the drawings of the scheme, with an additional half-sized set, and six copies of other documents are required unless otherwise noted in the Specific Requirements or Task Order. Full size drawings shall be 24 x 36" unless otherwise approved by DDC.

4. Architectural Design Documents

The Architectural Design documents, including Interior Design, shall include:

- **All Floor Plans**
  -Showing all major partitions, columns and door swings.
- **Building Sections and Elevation**
  -With materials shown.
- **Locations for all Sections and Details**
  -Showing all building conditions.
- **Typical Reflected Ceiling Plans**
- **Door and Finish Schedules**
- **Elevator Shafts**
  -Layouts and details.
- **Furniture Layouts**

5. Landscape Architecture Design Documents

The Landscape Architecture documents shall include:

- **Site Plan**
  -With major grade elevations, land contours, materials and dimensioned locations of primary site features.
- **Builders Pavement Plan**
- **Planting Plan**
- **Site Materials Plan**

- **Details**
  -Of key site design elements.
- **Site Demolition**
  -And removals plan.
- **Site Grading**
  -And storm drainage plan.
- **Site lighting**
  -And site electrical plan.
- **Site Irrigation Plan**

6. Structural Design Documents

The Structural Design documents shall include:

- **Type and Strength**
  -Of all structural materials.
- **Design Soil Bearing Value**
  -And pile type and capacity.
- **Sizes, Locations and Details of Major Structural Elements**
  -And their connections, including equipment supports and site structures.
- **Bottom Elevations of all Footings**
  -Estimated pile lengths and underpinning requirements.
- **Location and Details of all Construction Joints**
  -Control and expansion joints.
- **Waterproofing Details**
- **Design Live Load**
  -And column load schedules.
- **Required Construction Procedures**
- **Special Shoring or Bracing Requirements**
- **Calculations**
  –Shaft, footing, structural calculations.

7. Plumbing Design Documents

The Plumbing Design documents shall include:

- **Sewers**
  -Location of storm and sanitary sewers, connection to existing sewers, pertinent inverts, size and location of water services, domestic and fire and the location of gas service, indicated on the Site Plan.
- **Plans**
  -Showing the location and size of all roof drains, standard or interior piping for storm, sanitary, cold water, hot water, circulating, gas, and or fire standpipe.
- **Grade Elevation Location**
  -And grade elevation of catch basins, manholes and drains.
- **Size and capacity**
  -Of oil separators, hot water storage tanks, sump pumps, sewage ejectors and house pumps.
- **Riser Diagrams**
  -For all systems.
- **Gasoline and Diesel Systems**
  -Complete information on a single drawing, including details and notes.

8. HVAC and Fire Protection Design Documents

The HVAC/Fire Protection Design documents shall include:

- **Floor Plans**
  -The major components of all systems, including room-by-room duct distribution, diffuser and register locations, branch sprinkler piping and head locations.
- **Equipment Schedules**
  The Consultant shall submit equipment schedules with basic equipment design parameters completed so as to show type, capacity and zoning of systems. All HVAC/fire protection and other special systems shall be indicated.
- **Flow Diagrams**
- **Systems**
  Provide complete schematic flow diagrams for all systems, both new and existing to be modified. These include air, steam, chilled water, condenser water, hot water, fire protection and fuel oil.
- **Steam and all Water Systems**
  The Consultant shall provide a complete diagram of the steam and water systems, showing all necessary equipment and valves.
- **Schematic Flow Diagrams**
  -For all air handling, air conditioning and exhaust air systems. The Consultant shall show all automatic controls, dampers, temperature sensors, control valves, return/relief air routing and maximum and minimum air quantities for supply, return and relief air.
- **Riser Diagrams**
  Provide riser diagrams including air, water and steam risers for all new systems and all existing systems which are being modified.
- **Detailed Sequence of Operations and Control Systems**
  -Specifications and schedules shall include a specific operating and control sequence, and all required interlocking for each system.
- **Mechanical Room Layouts**
  -Showing duct shaft layouts and pipe routing.
- **Scale for Mechanical Equipment Room Plan**
  -Is to be 1/4" = 1'-0" or larger.
- **Mechanical Equipment Room Section Scale**
  -Is to be 3/8" = 1'-0" or larger.
- **Piping and Valves**
  -3" diameter and larger in mechanical equipment rooms are to be indicated with double line drawings.
- **Composite Sections**
  A minimum of two composite sections for each mechanical equipment room are to be provided.
- **Sufficient Sections**
  If the mechanical equipment room contains multiple pieces of equipment, sufficient sections shall be developed to show the elevations of all equipment, piping, ductwork and structural supports.
- **New and Existing Equipment**
  For equipment rooms, corridors and all other areas involving the work of more than one trade, provide composite sections showing all new and existing equipment and conditions.
- **Required Access Space for Mechanical Equipment**
  The Consultant shall clearly indicate on the drawings the manufacturer's required access space or tube-pull space for all mechanical equipment. All equipment components shall have

sufficient space for maintenance, repair and replacement for fans, coils, electric motors, filters, pumps, dampers, valves and controls.

- **Identification**
  All air-handling units shall have clearly identified all coils, filters, access locations and mixing plenum. The location and weight of all equipment shall be indicated. Show openings, penetrations and support.
- **Changes**
  The Department of Design and Construction reserves the right to direct the Consultant, at no charge to the City, to make changes in equipment size, location, capacity or performance for all portions of the Consultant's design which were not adequately represented or previously approved by the Department of Design and Construction during Preliminary submissions.

9. Electrical Design Documents

The Electrical Design documents shall include:

- **Identify all Spaces**
  -Using the same names, room numbers, and column designations indicated on the architectural drawings.
- **Plans**
  All projects shall have electrical plans separated into demolition plans, lighting plans, power plans and low voltage system plans (including those for fire alarm, telecommunication, and sound systems).
- **Location of all Devices**
  Devices, lighting fixtures, panels, motors, and electrical equipment shall be indicated on plans.
- **Service Entrance Equipment**
  -Plans and elevations of all service entrance equipment and panel boards to scale in the electric service room. Submit detailed load summary.
- **All Branch Circuiting**
  -And indicate separate circuits for lighting and receptacles. Common neutral may be used for lighting circuits only.
- **Riser Diagram**
  -Or single line diagrams for all systems such as fire alarm, sound and security.
- **Control Wiring Diagrams**
  -Where necessary.
- **Detailed Panel Schedules**
  -And provide twenty-five percent spare capacity for the circuit breakers and feeder. Details shall include circuit destination load in volt-amperes, overcurrent setting, load summary, connected, spare and demand load.
- **Lighting Fixture Details**
  -With detailed method of support.
- **Single Line Diagram and Riser Diagram**
  -For electric service and power distribution system.
- **Short Circuit Calculations**
  -And voltage drop calculations for all affected points in the distribution system. Indicate short circuit values on appropriate points of the single line diagram.
- **Selective Coordination**
  -Between the service switch or circuit breaker and the switch and the switchboards, and downstream of the switchboard.

- **Design and Specify for Short Circuit**
  Equipment and devices shall withstand the maximum short circuit current available from the utility.
- **Specification of all Systems**
  Specify all electrical equipment and material, including lighting fixtures in complete detail. All systems in the Contract are to be fully described.
- **Emergency Power**
  Provide complete emergency power system consisting of emergency generator and/or un-interruptible power system.
- **Motor and Equipment Schedule**
  Complete the motor and equipment schedule in the General Conditions.
- **Seismic Design**
  The electrical design shall meet the latest Uniform Building Code provisions for resisting earthquakes. Specify or show details for anchoring and supporting all electrical equipment.

10. Elevator Design Documents

For projects that include elevators, the Consultant is responsible for:

- **Floor Plans**
  -Of all equipment such as controllers, main disconnect switches, motor generator sets, inter-communication equipment, ventilation and air conditioning equipment.
- **Riser Diagrams**
  -Indicating elevator installation, floors covered, total travel of elevators, buffer and door openings.
- **Car Details**
  -Internal finishes, construction of car, emergency exits, lighting including emergency lighting, handrail, exhaust fan, flooring and all accessory equipment.
- **Detail Drawings**
  -For hall buttons, lanterns, and car operating panel.
- **Fireman's Recall**
- **Calculations**
  -Shaft, footing, structural calculations.

11. Furniture and Equipment

For projects involving furniture and equipment, the Consultant is responsible for:

- **Plans**
  The Consultant shall provide complete furniture plans, which shall be dimensioned, labeled and keyed. Include all space system furniture, loose furniture and built-in furniture and equipment.
- **Points of Entry**
  The Consultant shall develop furniture plans which illustrate points of entry for electrical outlets, telephone jacks and computer locations for furniture systems.
- **Dimensions and Room Numbers**
  Drawings for loose furniture and systems furniture shall indicate dimensions and room numbers and shall contain a furniture legend and keys to identify all items shown on the plans.
- **Vendor Requirements**
  Systems furniture plans must meet with the vendor requirements as to format, key and installation guidelines.
- **Systems Furniture**

Installation plans, as required by the vendor, consist of the complete set of component, panel and electrical drawings.

- **Coordination**
  Coordinate location with electrical receptacles and data outlets.
- **Furniture Specifications Book**
  The Consultant shall provide the completed furniture specifications book, with keys to cross reference individual items with the plans, prepared in two sections: Requirement Contract Purchase Items and Bid Items.
- **Color and Sample Boards**
  The Consultant shall provide three distinct color schemes and prepare a complete set of color boards of the selected solution, showing furniture finishes and fabric selections complete with labeling and room locations. Boards shall be presented in conjunction with the building interior colors and materials boards. After approval, the Consultant shall provide three sets of the final furniture finish and color boards.
- **Cost Estimate**
  The Consultant shall provide an updated final furniture and equipment budget, including required contingencies.
- **Loose Furniture**
  The Consultant shall provide installation plans for loose furniture and equipment and space system furniture. Space system furniture plans shall meet the vendor requirements, which generally include fully dimensioned and labeled panel layouts, component layouts, and electrical layouts, including wall and floor entries and telephone and computer locations.
- **Space Components Panel and Electrical Layouts**
  -Necessary to form a complete set of documents for the purchase and installation of a fully functioning system, shall illustrate items locations, item sizes and hardware and finish schedules.
- **Electrical and Communication Connections**
  -Shall be coordinated with the building drawings.

12. Hazardous Materials Bid Documents

For projects involving the removal, handling and disposal of hazardous materials, when DDC's Environmental Health and Safety Services team is not handling hazmat, the Consultant shall be responsible for:

- **Environmental Specifications**
  Provide plans, drawings and written design specifications to perform any remedial/abatement work and provide for temporary re-insulation, weather protection, prevention of soil erosion, spill prevention, etc that may be indicated. These documents must be in a format suitable for bidding and included with the final bid documents prepared by the Consultant for the overall project.
- **Standard Operating Procedures**
  The Consultant shall provide within the specification the following procedures and protocols in compliance with NYC DEP and NYS Department of Labor standards, as necessary for the scope of the environmental work:
  - **Special experience requirements for environmental abatement/remediation**
  - **Emergency precautions and notifications**
  - **Quality assurance standards**
  - **Air monitoring and/or bulk sampling requirements**
  - **Removal/remediation procedures**
  - **Decontamination procedures**
  - **Critical barriers and engineering controls**

- **Waste handling and disposal**
- **Reinstallation or replacement with non-hazardous materials**
- **Identification of products**
  The Consultant shall identify any and all products necessary for completion of the hazardous materials abatement, with performance specifications for those products, including, but not limited to, material handling devices, replacement materials, specialized tools and equipment, cleaning materials, worker protection (respiratory protection and protective clothing), waste disposal materials, decontamination facilities, barriers and air moving equipment.

- **Cost Estimates**
  The Consultant will be required to submit detailed cost estimates, construction phasing plans, CPM charts and regulatory filings. These filings may include NYC DEP ACP 5, proforma ACP 7 (filed with the NYC Department of Buildings) and applicable variances, NYS DOL variances, NYS DEC notifications and work plans and any federal EPA / OSHA / DOT filings or notifications that may be required due to the nature of the hazards within the scope of work.

13. Addendum to General Conditions, Bid Form, and Technical Specifications

- **Addendum to the General Conditions**
  The Consultant shall insert project-specific information in the DDC-formatted "Addendum to the General Conditions." This procedure eliminates the need to modify selected pages of the General Conditions.
- **Bid Form**
  A blank template version of the Final Estimate is required, and it is not to include amounts for labor, material, general conditions, or overhead and profit. (See Contractor's Bid Breakdown Form at www.nyc.gov/buildnyc) The form shall be labeled "Contractors' Bid Breakdown" on a diskette using DDC-approved spreadsheet format. A hard copy of the form is also required. Quantity take-offs shall be automatically generated by data derived from the final CAD drawings.
- **Technical Specifications**
  Prepare in conformance with the requirements for the 100% design phase.
  - **Format**
    Specifications shall be as complete as possible.
  - **Coordination**
    All specified Non-Proprietary Items require proper identification of "or equal" requirements including at least three product and manufacturer alternatives. All Special Experience Requirements and all Guaranty and Warranty Periods indicated in the Technical Specifications must exactly correspond to the data entered into the Addendum to the General Conditions.
  - **Proofread**
    At 75% Final Design, the Consultant shall proofread the entire specifications prior to submission for review. The use of proper reference to the Department of Design and Construction, and elimination of any and all references to "the Authority," "the Corporation," "the Client," "the State" and other incorrect usage is required.

C 100% FINAL DESIGN DELIVERABLES

1. Progress Meeting Minutes

The Consultant shall prepare Minutes, following the DDC format, within three working days of Progress Meetings. The Consultant shall distribute Minutes to all attendees.
Minutes summarize:

- **Decisions Made – and by whom they are made.**
- **Open Issues – the persons responsible and the schedule for resolution.**

2. Summary of Deliverables

After approval of the Final Design Drawings, Technical Specifications and the Addendum to the General Conditions, the Consultant shall deliver the following to the Department of Design and Construction. Copies of disks, Final Cost Estimate and final indexed set of structural design calculations shall be submitted for permanent DDC records with the bid document submissions.

- **Sets of the Final Design Drawings and Specifications:**
  - **Drawing Format**
    Six copies of the drawings of the scheme, with an additional half-sized set, and six copies of other documents are required unless otherwise noted in the Specific Requirements or Task Order. Full size drawings shall be 24 x 36" unless otherwise approved by DDC. Final Design drawings shall be reproducibles on mylar. Microfiche reproductions may be required, along with CAD file diskettes and half-size reproducibles.
  - **Conformity with Comments**
    Drawings shall fully conform to comments by the Department of Design and Construction.
  - **Stamp**
    Drawings shall bear the required seal and signature of the Consultant and all applicable Subconsultants.
  - **Approvals**
    Drawings shall bear stamps of approval by each regulatory agency, as required.
  - **Signatures**
    Submit title sheet transparency for signatures at the final submission. Include identification, professional seals and signatures of the Consultant and any Subconsultants on all final drawings so as to meet the requirements of Article 27-157 of the New York City Administrative Code.
  - **All Final Specifications**
    -Shall be in clear legible form, typed one side only on 8½"x11" white bond paper, unbound, boxed and having no punched holes. Final specifications shall be checked for completeness, properly collated and ready for photocopying. All Final Specifications shall be proofread, revised or corrected, if necessary, prior to submission. Assure proper reference to the Department of Design and Construction.
- **Estimate and Calculations**
  Final Cost Estimate and Final indexed set of structural design calculations shall be submitted.
- **Perspectives and Models**
  -Updated, revised or redone perspective renderings and scale models in accordance with the accepted Final Design documents.
- **Materials and Color Board**
  -Including material samples and paint color chips. Submission of this sample board shall be made prior to the submission of the 100% Final Design documents for DDC approval.
- **Project Fact Sheet**
- **Bar Graph Construction Schedule**

-Indicating all phasing and Client Agency requirements.

- **Finished Purchase Orders**
  -For furnishings, if required, which meet the approval of the Department of Design and Construction. Submission of rough purchase orders shall have been made prior to submission of the final design documents for DDC approval.
- **Individual Room Plans**
  -With all items of furniture and equipment listed on 8½"x11" sheets.

3. Drawings

The drawings shall:

- **Be Complete**
  -And fully define the work as required under the Contract.
- **Be Coordinated**
  -With the specifications in accordance with a standard organization such as that described in the Building Design and Construction Documents sections of the AIA Handbook of Professional Practice.
- **Incorporate All Adjustments**
  -Adhere to all the requirements of the approved Design Development drawings.
- **Include Composite Drawings**
  -For clarification.
- **Be Drafted Clearly**
  -So that legible half-size reproductions can be made and have sufficient line density to provide uniform photographic quality. The minimum lettering height of 5/32" and full height spacing shall be used between lines. Uppercase type only is to be used for all lettered material on the drawings.
- **Contain Color Schedules**
  -Correlated to the materials and color chart.
- **Use Mylar**
  Drawings will be submitted on wash-off mylar polyester film for both mechanically reproduced transparencies and originals.
- **Include Borings**
  -And other subsurface information and topographical maps, noted "For Reference Only."
- **Contain Graphic and Alphanumeric Scales**
  -To avoid confusion on reduced sized prints.

4. Bid Booklet and Addendum to the General Conditions

- **Standard Versions**
  The Consultant will have received standard versions of the Bid Booklet, General Conditions, and Addendum to the General Conditions at the Project's Design Kickoff meeting. The Consultant shall prepare the Bid Form for the Bid Booklet and modify the Addendum to the General Conditions as necessary to meet project-specific requirements. These project-specific documents must be updated from the 75% Final Submission and included with the 100% Final Submission.
- **Special Experience Requirements**
  The Consultant shall prepare, for the approval of the DDC Project Manager, a written list identifying areas where Contractor Special Experience Requirements are advisable.

5. Multi-Contract and Single-Contract Addenda to the General Conditions

The Consultant shall prepare customized Addenda to the DDC boiler-plate General Conditions. The requirements for Single Contract Specifications are the same as those for Multiple Contracts

except that they list of separate contracts is not required. Items to be inserted by the Consultant include but are not limited to the following:

- **Project Name - And description**
- **List of Separate Contracts**
- **Project-Specific Deletions and Amendments**
- **Schedule "A" - Indicating Contract Duration, Liquidated Damages, and Insurance, including coverage on Asbestos and Insured Parties**
- **Schedule "B" – Guarantees and Warranties corresponding to those in the Technical Specifications**
- **Schedule "C" – Complete list of Contract Drawings**
- **Schedule "D" – Indicating Electrical Motor Control Equipment**
- **Schedule "E" – Indicating Separation of Trades**
- **Schedule "F" – Shop drawings and materials Samples Schedule**

6. Final Specifications

- **Format of Specifications**
  Technical Specifications shall follow the CSI division and section structure, and shall meet, at minimum, the construction technology standards in the latest version of the CSI Manual of Practice. Specifications shall incorporate required language for low toxicity and high recycled content materials as well as a waste management plan and related construction and demolition waste requirements.
- **Coordination of Specifications**
  Technical Specifications shall be prepared and coordinated with drawings in accordance with the Building Design and Construction sections of the latest AIA Handbook of Professional Practice.
- **Final Submission**
  The Consultant shall submit complete technical specifications incorporating revisions necessitated by prior comments.
- **Commissioning Specification**
  – For HVAC, Plumbing, and Electrical systems in project to be commissioned.

7. Material and Color Boards

The material and color boards shall indicate exterior finishes, interior finishes, all paint colors and all furnishings, with finishes and fabrics shown. After obtaining approval of the Client Agency representative and the DDC Project Manager on the items listed above, the Consultant shall submit three copies to the DDC Project Manager, for office, field and Contractor. An additional copy shall be retained in the Consultant's own file.

8. Final Cost Estimate

- **Changes in Construction Costs**
  As the Final Design proceeds, the Consultant shall keep track of the project construction cost, and advise DDC of any changes. If it appears that the construction cost limit may be exceeded, the Consultant shall review areas where economies can be achieved, and submit recommendations for approval to keep the construction costs within budget. The Consultant may be required to re-design, as directed by the DDC Project Manager. The cost estimate shall include hazardous materials removals, handling and disposals.
- **Design Contingency**
  The Final Cost Estimate (see Cost Estimate Form at www.nyc.gov/buildnyc) shall meet all DDC requirements. At this time the ten percent design contingency is no longer to be part of the estimate. The Final Cost Estimate for all Contracts shall be in the same CSI format as

the Design Development Cost Estimate with the exception that design contingency need no longer be included. The estimate shall be done with a computerized estimating program.

- **When Costs Exceeds 110% of Final Cost Estimate**
  The Consultant shall prepare and submit to DDC for acceptance, a complete and final estimate of the total construction cost of all work necessary for the complete construction of the project, based upon the final design drawings and Specifications. If the low bids of all qualified and responsible Contractors are in excess of one hundred and ten percent of the Final Cost Estimate, the Consultant will need to bring the total construction cost of the project within the Final Cost Estimate. At no additional cost to the City, the Consultant shall revise all or any part of the project that the Department of Design and Construction, in conjunction with the Consultant, may deem advisable.
- **Contractors Bid Breakdown Form**
  The Consultant shall prepare and submit a "Contractors Bid Breakdown" form similar to the CSI formatted Final Cost Estimate. This form shall contain the identical specification sections and specified items in strict CSI format. In addition, a blank template version of the Final Estimate is also required. This is not to include amounts for labor, material, general conditions, or overhead and profit. The form shall be labeled "Contractors' Bid Breakdown" on a diskette using DDC approved spreadsheet format. (See Chapter IX, Section D) A hard copy of the form is also required. Quantity take-offs shall be automatically generated by data derived from the final CAD drawings.

9. Unit Price Allowance Work Order

For components of the project scope for which Contractor unit prices are useful, the Consultant shall prepare and submit a list of suggested items, quantities, unit prices, and specifications for each item. This list is to be based on the DDC format, and submitted to the DDC Project Manager for acceptance. Unit price allowance work orders during construction will diminish change order negotiations. The total unit price allowances for each trade shall not be more than ten percent of the construction costs. The Consultant shall assist the Department of Design and Construction in anticipating the most likely use.

10. Long Lead Time Items

The Consultant shall update and finalize the list of long lead time items required.

11. Final Energy Analysis

This analysis shall show compliance with the New York State Energy Conservation Code.

12. High Performance Pilot Projects

Projects shall conform to the requirements of the High Performance Plan developed at the outset of the design process.

13. Review Comments Response

The Consultant is required to respond in writing to design and constructability comments received from the technical review groups of the Department of Design and Construction and/or the CM performing the Constructability Review as well as from the Commissioning Agent when agent is used. Response should be no more than two weeks from receipt of comments, and should address the spirit of the comments as well as the specific issues. Timely compliance with Final Design and Constructibility review comments will accelerate the start of the bid process and construction.

VI. BID, AWARD AND REGISTRATION

VI. BID, AWARD AND REGISTRATION

A BID, AWARD AND REGISTRATION SERVICES

During the period of advertising, receipt and analysis of bids, the Consultant shall:

1. Interpret Plans and Specifications

Interpret plans and specifications when requested by the Department of Design and Construction in response to inquiries by prospective bidders.

2. Prepare and Issue Amendments and Drawings

Prepare and issue all necessary addenda, amendments and drawings required for the clarification of plans and specifications. Such documents shall be issued through the Department of Design and Construction.

3. Assist in the Analysis and Evaluation of Bids

Assist in the analysis and evaluation of bids and within three days of the bid opening make written recommendations and reports on the disposition of bids and the award of Contracts.
Assist in the Review and Evaluation of Special Experience Qualifications
Assist in the review and evaluation of special experience qualifications of the subcontractors proposed by Contractors.

4. Attend Pre-Bid Meetings

Attend pre-bid meetings to answer questions from bidders and to assure that all parties clearly understand the intent of the Contract Documents. As determined by the Department of Design and Construction, pre-bid meetings may be required with the Consultant, the Client Agency representative and the DDC project team. Pre-bid meetings for complex projects are held at the site to ensure that all bidders become familiar with existing conditions. Agenda items include highlights of the Contract emphasizing any unusual work. If any of the questions posed by the Contractors requires a change to the Contract Documents, the Consultant is responsible for the preparation and issuance of an Addendum.

5. Attend Pre-Award Meetings

Attend Pre-Award Meetings to answer questions and to provide additional support and analysis in the understanding of the intent of the Contract Documents. As determined by the Department of Design and Construction, pre-award meetings for all prime contracts are required with the Consultant, the Client Agency representative and members of the DDC project team. DDC holds a Pre-Award Meeting for the low bid Contractors under any of the following circumstances:

- **If the low bid varies more than fifteen percent from the Final Cost Estimate, or from the other low bidders.**
- **If the low bidder has never done work for the City before.**
- **If DDC considers the meeting necessary to ascertain whether the Contractor has the necessary experience and resources to properly complete the project.**

B BID, AWARD AND REGISTRATION DELIVERABLES

During the period of bid advertisement and analysis, the Consultant shall prepare, as necessary, the following:

1. Addenda

Addenda drawings and specifications shall be produced by the Consultant as required by Contractor questions and requests for information arising during the Pre-Bid Meeting or as otherwise necessary for the clarification of the Bid Set of Contract Documents. The Consultant shall submit all addenda, including drawings and specifications, to the DDC Project Manager. The DDC Project Manager will inform the Consultant of all format requirements, including the specific addendum number.

2. Filing and Signatures

The Consultant, or appropriate subconsultant, shall sign and seal all necessary drawings. Drawings which need to be filed with, or presented to, regulatory agencies, including, but not limited to, the NYC Building Department, shall be prepared and filed by the Consultant. The Consultant shall send regulatory agency approvals to the DDC Project Manager. Changes that require approval by the Art Commission or Landmarks Preservation Commission will be filed by the Department of Design and Construction.

3. Bid Tabulation Analysis

The Consultant shall attend the Bid Opening and review the Bid Tabulation available at the conclusion of the Bid Opening to assist in discovering any bid anomalies.

C FURNITURE AND EQUIPMENT

For projects involving furniture and equipment the Consultant is responsible for:

1. Requisition Forms and Purchase Orders

Upon completion of the base building Contract Documents, the Consultant shall meet with the DDC Project Manager to receive prototypical requisition forms and purchase orders and to establish a schedule for their completion.

2. Coordination

Upon receipt of the completed forms, the DDC Project Manager shall forward the forms to the Division of Municipal Supplies of the Department of Citywide Administrative Services. The Consultant shall coordinate the delivery schedule with the various vendors holding furniture Requirement Contracts at the Department of Citywide Administrative Services.

3. Phasing of Furniture Acquisition

If necessary, the Consultant shall prepare separate requisition forms for each floor and construction phase of the project, ensuring that deliveries will be prompt, that the installation will be complete and that furniture storage for future phases will be kept to a minimum.

VII. SERVICES DURING CONSTRUCTION

VII. SERVICES DURING CONSTRUCTION

A BASIC SERVICES DURING CONSTRUCTION

1. Summary of Basic Services

The Consultant shall perform basic services as described under the headings listed below at no additional compensation.

- **Monthly Site Visit**
  -Monthly site visit and field inspection.
- **Bi-weekly Site Meetings**
  -Job meeting attendance and minutes.
- **Review**
  -Of shop drawings, samples, cuts and mock ups.
- **Estimates**
  -Review and approval of detailed estimates.
- **Subcontractor Qualifications**
  -Review and recommendations.
- **Interpretation**
  -Of the contract documents and to provide drawing amplifications of building details when the bid documents are unclear.
- **Resolve Design Errors**
  -Provide documents to resolve design errors.
- **Coordinate Documents**
  -Review of the Contractors' coordination documents and adherence to the construction schedule.
- **Change Orders**
  -Identification, review and verification of Contractors' change orders and preparation of Consultant's design change orders.
- **Furniture and Equipment**
  -Preparation for and approval of furniture and equipment installation.
- **Punch List**
  -Participation in the preparation of a punch list.

2. Monthly Site Visit and Field Inspection Reports

The content of the Field Inspection Reports is essential to assuring the quality of the construction work. Detailed observations on current work, field conditions, connections, clearances and Contractor capability will assist the DDC Project Manager in quality control efforts. The Field Inspection Report is the vehicle by which the Consultant is empowered to assure that ongoing construction work is in compliance with the design intent, details and specifications that form the basis of the Contract Documents.

- **Consultant**
  The Consultant shall visit the site monthly for the purpose of preparing a field report. The Consultant shall report in writing all observations on issues of quality of all ongoing inspected work or site conditions. Consultant Field Inspection Reports shall be on the approved DDC forms.
- **Subconsultants**
  The Subconsultants shall visit the site when work affecting their respective area of responsibility is being performed, and shall report in writing on issues or quality of the inspected work or site conditions. Subconsultant Field Inspection Reports shall be on the approved DDC forms.

- **Content**
  The content of the Field Inspection Reports is essential to assuring the quality of the construction work being installed. Detailed observations on current work, field conditions, connections, clearances and Contractor capability will assist the DDC Project Manager in quality control efforts. The Field Inspection Report is the vehicle by which the Consultant is empowered to assure that ongoing construction work is in compliance with the design intent, details and specifications, which form the basis of the Contract Documents.
- **Experience**
  The Field Inspection Reports are to be prepared by members of the Consultant team who are thoroughly familiar with the job and have a minimum of five years of field experience.
- **Submittal**
  The Field Inspection Reports are to be submitted in writing to the DDC Project Manager within five working days of the site visit. This will enable the DDC Project Manager to address the issues identified in the reports at the next project site meeting.
- **Attachment**
  The Field Inspection Reports are to be attached to the job site meeting minutes and shall be signed and sealed by the appropriate Registered Architect, Professional Engineer or Registered Landscape Architect.

3. Bi-Weekly Job Site Meetings and Minutes

- **Consultant and Subconsultants Meeting Attendance**
  To facilitate completion of the work according to the standards of quality and the schedule set by the construction documents the Consultant is required to attend all project meetings. Subconsultants, as deemed necessary by the DDC Project Manager, are also required to participate in the relevant portions of such meetings. These include the Construction Kick-off (Pre-Construction) Meeting, job-site meetings held every two weeks, and all meetings relating to the design.
- **Purpose of the Meetings**
  At the regular job meetings the progress of the work is reviewed and the work coordinated between the various Prime Contractors. Attendees identify and confirm the next scheduled activities of work and eliminate, if possible, potential delays due to deliveries, field conditions, staffing or swing space.
- **Shop Drawing Log**
  An additional agenda item at the project job site meetings is the review of the Shop Drawing Log, taking appropriate action to ensure that submittals deadlines and review turn-around periods are met.
- **Requests for Information**
  A primary purpose of Consultant participation at the job site meetings is to be able to obtain or respond to any Requests for Information coming from the Prime Contractors.
- **Prepare and Distribute the Meeting Minutes**
  On projects without Construction Managers, the Consultant shall attend all bi-weekly job meetings and prepare and distribute the bi-weekly job meeting minutes within five working days of the meeting. Copies shall be distributed to all meeting attendants and others as identified by the DDC Construction Project Manager. The DDC Construction Project Manager will prepare the meeting agenda and conduct the job-site meetings.
- **Format of Meeting Minutes**
  The bi-weekly job site meeting minutes shall be prepared in a format determined by the Department of Design and Construction.

4. Review of Shop Drawings, Samples, Cuts and Mock-Ups

- **Promptly Check Shop Drawings**
  The Consultant shall act promptly and systematically to check all shop drawings, material samples, catalogue cuts and items exhibited in mock-ups.
- **Consultant or Subconsultant**
  The Consultant or Subconsultant shall determine whether the shop drawings, material samples, products identified in catalogue cuts and items exhibited in mock-ups are in accordance with the Contract Documents and Specifications.
- **Sheeting, Bracing and Underpinning**
  In addition to checking shop drawings, samples, catalogue cuts and on-site mock-ups, the Consultant or competent Subconsultant shall review all necessary documentation for sheeting, bracing and underpinning.
- **Indicate Necessary Changes**
  The Consultant or Subconsultant, if required, shall indicate in writing the changes necessary to conform to the Contract Documents and Specifications within ten working days of the submittal. Reply by the Consultant shall be to both the submittor and the DDC Project Manager.
- **Design Changes**
  The Consultant shall make no changes to the design or changes causing additional cost or project duration without prior written approval from the Department of Design and Construction.
- **Long Lead Time Items**
  The Consultant shall prepare a separate list of all items that require early procurement. These long lead time items, which may significantly impact project duration and coordination shall have previously been discussed during project design. Long lead time items shall also be highlighted on the Shop Drawing Log Form.
- **Shop Drawing Log Form**
  The Consultant shall submit the list of required shop drawings, samples and catalogue cuts that have been previously prepared and incorporated into the Specifications on the Shop Drawing Log form. The Shop Drawing Log, in the approved format, shall be presented to the project Contractors at the Construction Kick-off (Pre-Construction) Meeting. Contractors shall be responsible for filling in the item submission dates and the delivery dates for approval by the DDC Project Manager.
- **Consultant Shall Receive Copies**
  The Consultant shall receive copies of the approved schedules for the submission of shop drawings, samples and catalogue cuts and shall review these lists every two weeks. Updated copies shall be submitted to the DDC Project Manager.
- **Indicate the Progress**
  The Consultant shall ensure that the updated copies of the approved schedules for shop drawings, samples and catalogue cuts shall include all information necessary to indicate progress on processing submittals for each Contract of the project.
- **Listed Information on Schedules**
  Listed information shall include the names of subcontractors, the titles of shop drawings and the due dates in accordance with the approved schedules. These include dates of issue, receipt, checking, return for correction, resubmission and final *acceptance*, along with other pertinent information.
- **Requirements of the Department of Design and Construction**
  The Consultant shall meet all requirements of the Department of Design and Construction with respect to procedure, stamping and transmittal. Changes in the shop drawing and material sample approval stamp shall not be made without the written approval of the DDC Project Manager.

5. **Review of Schedules of Items and Costs**
   The Consultant shall promptly examine, recommend adjustments to, or indicate approval of, the schedules of items and costs submitted by the Contractor for each Contract awarded. This will allow the Department of Design and Construction to establish a reasonable basis for subsequent partial payments to Contractors.

6. **Recommendation of Subcontractor Qualifications**
   The Consultant shall review the credentials of the proposed subcontractors for compliance with the special experience requirements. If project is within the most current NYSDAM quarantine area for the Asian Longhorn Beetle (ALB), this credential review shall include confirmed documentation that subcontractors have received ALB certification from NYSDAM.

7. **Interpretation of Contract Documents**
   - **Clarification**
     The Consultant shall interpret Contract Documents, provide clarifications, and make recommendations, by drawing and in writing, as required by the Department of Design and Construction.
   - **Prepare Additional Drawings**
     The Consultant shall promptly prepare any additional drawings that may be necessary for clarifying the design drawings prepared under the design contract.
   - **Submit Supplementary Drawings**
     The Consultant shall submit such supplementary drawings. They shall be done in accordance with DDC drawing standards.
   - **Sealed and Signed**
     Supplementary drawings are to be sealed and signed by the Consultant or the Subconsultant, as appropriate.
   - **Obtain Required Approvals**
     The Consultant shall obtain any approvals for supplementary drawings as necessary from regulatory agencies and utilities.

8. **Resolution of Design Errors or Omissions**
   - **To Resolve any Design Errors or Omissions**
     The Consultant, and any Subconsultants as required, shall promptly submit to DDC any necessary correspondence, supplementary or revised drawings, specifications, negotiated cost estimates and any other documentation or coordination material.
   - **Revised Work Documentation**
     Upon approval of the required changes in the contract documents by DDC, the Consultant shall promptly provide to the Contractors all the documentation necessary to execute the work as revised.

9. **Review of Contractor Coordination Documents**
   - **Review and Report**
     The Consultant or Subconsultant, as appropriate, shall review the Contractors' coordination documents and promptly report in writing to the DDC Project Manager on issues relating to meeting the project schedule and achieving the quality of work specified in the Contract Documents.
   - **Monitor Progress and Report Delays**
     The Consultant shall systematically monitor the progress of all construction work scheduled and promptly report to the Department of Design and Construction any conditions that may cause delays in the completion of the work.

10. Documentation of Consultant Change Orders

- **Compensation for Consultant Change Orders**
  Payment shall be made for Consultant Change Orders during the construction period resulting from scope changes, administrative changes and field conditions that could not reasonably have been anticipated prior to the time of bids, and which require design modifications. Compensation shall be in accordance with the "Agreement," with the total amount shown on the staffing chart to constitute the maximum payable for the change order work.
- **Staffing Plan and Cost Proposal**
  Within fourteen consecutive calendar days of any change order initiation the Consultant shall prepare a detailed staffing plan and cost proposal. The Consultant shall be fully prepared to negotiate the change order within this two week period.
- **Staffing Chart**
  The staffing chart must show number of technical employee work hours and non-supervisory principal work hours that will be required for each change order. The technical employee work hours shall be broken down as to title, expected work hours and average pay for each title.
- **Furnish Further Documentation**
  Following the change order negotiations, the Consultant shall furnish any and all further documentation requested by the DDC Project Manager to complete the Change Order package within seven consecutive calendar days.

11. Assistance with Contractor Change Orders

- **Supplemental Documents**
  Contractor Change Orders may require additional documents from the Consultant. The Consultant and Subconsultant, as required, shall prepare any necessary supplementary drawings, estimates, and specifications to clarify issues relative to any Contractor Change Order that does not require a Consultant Change Order.
- **Change Orders Less than $75,000**
  If the Contractor Change Order is equal to or less than $75,000 based on an initial estimate, the Consultant shall furnish all supplementary drawings, estimates and specifications to the Department of Design and Construction within seven consecutive calendar days from the date of request.
- **Change Orders Greater than $75,000**
  If the Contractor Change Order is greater than $75,000 based on an initial estimate, the Consultant shall furnish all such material within fourteen consecutive calendar days from the request date.
- **Consultant Review and Verification of Contractor Change Orders**
  Contractor Change Orders may require review and verification by the Consultant. The Consultant may be requested by the Department of Design and Construction to review the Contractor Change Order descriptions and verify that the proposed Contractor Change Orders were not part of the original scope of work of the Contract. When such requests are made, the Consultant shall review and verify the Contractor Change Orders within two working days from the date of request.

12. Installation of Furniture and Equipment

- **Furniture and Equipment Staffing Schedule**
  The Consultant shall submit a Furniture and Equipment Staffing Schedule at least three months prior to the scheduled completion of construction, consistent with the vendor delivery schedule as approved by the DDC Project Manager.

- **Site Visit**
  The Consultant shall conduct a site visit to survey the conditions at the site along the full path of the delivery, two weeks prior to the scheduled delivery. The Consultant shall identify problems such as unfinished ceilings, unpainted walls, missing electrical work, inaccessibility of elevators and lack of adequate parking or truck delivery area.
- **Efficient Furniture Installation**
  The Department of Design and Construction must be notified immediately by the Consultant if there are any conditions which will prevent efficient furniture installation.
- **Room Furniture Layouts**
  The Consultant shall provide individual room furniture layouts. These shall be posted, prior to delivery, at each respective room entrance.
- **Location of all Furniture and Equipment**
  The Consultant shall verify that all furniture and equipment is placed in the correct room, and in the proper location as per contract room plans. As items are delivered, the room lay-out plan shall be marked to identify items that have been received and installed.
- **Purchase Orders for all Furniture and Equipment**
  The Consultant shall verify that the furniture and equipment received is in accordance with the written purchase orders, and that any damaged items, unless easily repaired on-site, are rejected and so noted on the delivery slips.
- **Furniture Punch List**
  The Consultant shall maintain a current punch list of furniture and equipment delivered and shall resolve outstanding issues within two weeks of move-in. The final furniture punch list will detail rooms with missing furniture and items needing repair.
- **Signed Receiving Reports**
  The Consultant shall prepare a final package including all signed receiving reports and a letter of certification stating that all items which have been received are consistent with those ordered. This package shall be delivered to the DDC no later than one week after the completion of the installation.

13. Participation in Punch List

The Consultant shall, at Substantial Completion, participate in the preparation of the final construction Punch List. The Consultant shall submit a list of items for the Punch List to the DDC Construction Project Manager within ten working days of the request of such a list. This list of items shall be based on a final site visit and Field Inspection Report, and on any unresolved problems that have been the subject of earlier reports or job site meetings. The construction Punch List will be compiled at a final job site meeting and shall be part of the minutes of that meeting.

B ADDITIONAL SERVICES DURING CONSTRUCTION

1. Definition

Additional services consist of any design services and project representation above and beyond the services called for under "Basic Construction Related Services." Additional services during the construction period may be defined in the project Specific Requirements or may be requested by the DDC Project Manager to assure the quality of the work being installed and general adherence to the construction schedule.

2. Compensation for Additional Services

Additional services shall be compensated on time card basis. Such services include but are not limited to:

- **Minor Design Changes**
  -And related technical or administrative work.
- **Site Observation**
  -Full time job site observation.
- **Construction Schedule**
  -Reporting on adherence to construction schedule.
- **Site Visits**
  -Increased job site visits and Field Inspection Reports.
- **Site Meetings**
  -Conducting job site meetings.
- **Applications for Payment**
  -Expediting applications for payment by the Contractors.
- **Materials Delivery**
  -Expediting materials delivery and designing mock-ups.
- **Shop Visits**
- -Making shop visits to review fabrication process and materials.
- **Replies to Contractors**
- -Preparing replies to Contractors' letters and complaints.
- **Change Orders**
- -Preparing Change Orders on behalf of the Contractors.
- **Monitoring As-Built Drawings**
- -Prepared by the Contractors.
- **Substantial Completion Inspection**
  -Conducting Substantial Completion Inspection and reviewing readiness for Beneficial Occupancy.
- **Information to Defend Claims**
  -Preparing information to defend claims arising out of construction work.

3. Controlled Inspection Services

Controlled Inspections when performed by the Consultant are additional services which include:

- **Retaining the Services of a Professional Engineer and a testing laboratory**
  -To perform all tests and inspections required by regulatory agencies for items needing Controlled Inspection or certification.
- **Submitting all Controlled Inspection Reports**
  Submitting all Controlled Inspection Reports and certifications to regulatory agencies with copies to the DDC Project Manager.

4. Plant Tagging and Field Services

Plant Tagging by the Consultant is an additional service that includes the following:

- **Tagging of Plant Materials**
  The Consultant shall engage the services of a licensed Landscape Architect to select, tag with DDC seals, and supervise the planting of all plant materials. All individual plants shall be balled and burlapped or container-grown stock. Representative samples of ground cover grown in flats shall be inspected and tagged at the nursery before such plants are prepared for shipment. All plant materials shall be inspected for signs of Asian Longhorn Beetle infestation prior to shipment. Any infestation must be immediately reported to the New York State Department of Agriculture Markets.
- **Inspections of All Plantings**
  In addition to supervising the planting operation, the Landscape Architect hired by the Consultant shall inspect the final planting and notify the Department of Design and Construction when it is appropriate to accept the plantings and initiate the one-year guarantee. Inspections of all plantings shall be made by the Landscape Architect engaged by the Consultant throughout the maintenance and guarantee period, and sufficiently early that replacement plants may be planted in the appropriate planting season. The Landscape Architect is to identify for replacement all plants found to be unhealthy or infested by the Asian Longhorn Beetle. At the expiration of the guarantee period the Landscape Architect shall notify DDC as to whether or not the Contractor should be released from further obligation.
- **Preparing a Maintenance Report**
  The Landscape Architect shall prepare a report for the Department of Design and Construction indicating whether the Contractor is complying with the maintenance portion of the Contract and recommending actions required. Note that the planting acceptance and release are independent from acceptance of the general construction work. The report shall be prepared at a time appropriate to the planting installation, as determined by the DDC Project Manager.
- **Preparing a Maintenance Schedule**
  If directed by the Department of Design and Construction, the Landscape Architect shall prepare a written and graphic maintenance schedule and manual for all final project planting materials. Upon the approval of the manual, the Consultant shall submit the original to the DDC Project Manager. For each type of plant, the schedules and manual shall identify the requirements for irrigation, fertilization, pruning, weeding, cultivating, mulching, lawn care, seasonal plantings, plant replacement, pest control and disease control.

5. Resubmittal of Amended Final Drawings

Additional drawings prepared during the Construction period necessitated by changes to the project design resulting from field conditions, scope changes, or other unavoidable situations will be considered as additional services. The Consultant will be required to resubmit exterior building and site revisions to the Art Commission for amended final approval. Preparation of the additional drawings necessary for this reconsideration is a supplemental service.

C COMPENSATION

1. Adequate Compensation for Subconsultant Services

The Consultant shall assure adequate compensation to Subconsultants for all Services during Construction to be provided by Subconsultants. The DDC Project Manager may request documentation from the Consultant demonstrating that adequate payments have been made to assure performance of required Subconsultant Basic and Additional Services including but not limited to Field Inspection Reports.

2. Site Visits and Field Inspection Reports

The Consultant and principal Subconsultants shall conduct site visits and prepare Field Inspection Reports on a monthly basis for the duration of the construction unless stated otherwise in the Specific Requirements or Task Order.

3. Reimbursable Services for Extended Construction Period

If the construction period has been extended beyond the duration expected in the Specific Requirements or Task Order, additional compensation may be in order. If the extension has occurred through no fault of the Consultant, attending the on-site job meetings, preparing the minutes, and performing any of the other services listed in this section constitutes a reimbursable service. Compensation is to be made on an hourly basis.

4. Staffing Plan

The Consultant and Subconsultants, as required, shall prepare a staffing plan and cost schedule in accordance with the Specific Requirements or Task Order for DDC approval of any construction-related services required by an extension of the duration of construction.

VIII. REGULATORY APPROVALS

VIII. CHECKLIST OF REGULATORY APPROVALS

A REGULATORY APPROVAL SERVICES

The Consultant is responsible for the following services and activities relating to approvals and project close-out:

1. Construction Permit Handbook

The Construction Permit Handbook, published by the City of New York, describes detailed requirements for many of the regulatory agencies. It is the responsibility of the Consultant to become familiar with and comply with all regulatory requirements.

2. Initial Application Procedures

The Consultant is responsible for verifying that all initial applications and procedures that may influence the design and schedule of the project have been completed. These may include the Uniform Land Use Review (ULURP), City Environmental Quality Review (CEQR) and Environmental Impact Statement (EIS).

3. Approvals Report

The Approvals Report shall be scheduled and identified in the project schedule and on the project checklist or Approvals Report and shall be discussed at the Design Kick-off meeting. In accordance with the services and deliverables of the Schematic Design, Design Development and Final Design phases, and with the requirements of construction scheduling and phasing, the Consultant shall obtain approvals as early as project development allows.

4. Service Requests

The Consultant shall file for utility service requests at the earliest possible time. Cost assumptions at utility service filing are based on budget estimates and may be revised by the Consultant with the concurrence of the DDC Project Manager for utility company purposes. Should preliminary cost assumptions be based on estimates, they can be subsequently revised. Reply by the utility company to initial service requests is expected from eight to fourteen weeks after filing by the Consultant. Where the same utility company provides electric, gas and steam service, requests for all such services must be made at the same time. The Consultant shall include a plot plan of the proposed building, with the desired points of service entry measured from a fixed existing point. The Consultant will submit a copy of complete service requests to the DDC Project Manager.

5. Timely Applications

Immediately upon filing any application, the Consultant shall submit copies to the DDC Project Manager. The Consultant is required to file applications as early as possible. The Consultant must follow through to insure rapid handling and examination, so as to minimize time loss. The Consultant must notify the DDC Project Manager if any delays occur. Copies of responses from regulatory agencies and utilities must be submitted to the DDC Project Manager.

6. Amendments

The Consultant shall arrange to file amendments and receive approvals for the revised work, where approvals have been received and changes are subsequently made which affect the work already covered. The Consultant shall advise the DDC Project Manager of any developments in the construction drawings which conflict with submittals under review or submittals previously approved by regulatory agencies.

B REGULATORY APPROVAL DELIVERABLES

Requirements for deliverables by the Consultant include:

1. Approvals Report

The Consultant must complete the DDC Approvals Report Form PA-1, adding the heading, checking the required items, and adding needed regulatory agency approvals. The Consultant shall submit the completed form as a requirement for the initial design fee payment in Schematic Design. The Approvals Report form must be revised whenever there is a significant change in the project scope of work, including revisions brought about by design change orders.

2. Record

The Approvals Report Form must be filled out and maintained as a record, to be reviewed at all progress meetings, as the applications are submitted and approvals obtained. By the 75% meeting during Final Design, all required applications must have been filed, and, when possible, approvals obtained from the regulatory agencies and utility companies. Copies of these applications and the Approvals Report Form will be submitted by the Consultant to the DDC Project Manager. When complete the PA-1 form serves as the final record of all required approvals.

3. Copies

Copies of all Regulatory Agency approvals of both plans and applications shall be included in the required milestone submissions.

4. Microfilm

Microfilm of the Building Department drawing submission must be submitted by the Consultant to the DDC Project Manager.

5. Amendments

The Consultants are required to file Amendments for changes implemented during construction that cause the executed work to differ from that for which approvals were originally obtained from the regulatory agencies

6. Sign-offs and Certificate of Occupancy

Consultant participation may be required during the sign-off and the Certificate of Occupancy phase.

C REGULATORY ENTITIES

The Consultant is responsible for filing complete applications and documentation, and for obtaining all approvals for the project in accordance with current requirements of the appropriate regulatory agencies and utility companies. These include the following:

1. City Planning Commission

The City Planning Commission and the NYC Department of City Planning have overall responsibility for variances, special permits and Uniform Land Use Review. ULURP applies to changes, approvals, contracts, consents, permits and authorizations for map changes. The Department of City Planning conducts City Environmental Quality Review (CEQR) in conjunction with the NYC Department of Environmental Protection.

2. Department of Buildings

The Department of Buildings has primary responsibility for the enforcement of the Administrative Building Code, the Zoning Resolution, Multiple Dwelling Laws and Labor Laws as well as the enforcement of regulations relating to construction, alteration, maintenance, use, occupancy, safety and sanitary conditions of buildings located in New York City. The Building Department, in addition, issues violations for non-compliance with the NYC Building Code. For applicable Building Code items, approval by the NYC Department of Environmental Protection and other agencies may also be required.

- **Hazardous Materials**
  The Consultant should file either an ACP-5 or ACP-7 form with the Department of Buildings which shall, in turn, transmit them to the Department of Environmental Protection. The ACP-5 form is used when little or no asbestos exists. The ACP-7 form is used when asbestos is present.
- **Building Department Alteration Type I**
  The Building Department Alteration Type I is indicated for major alterations requiring a new or amended Certificate of Occupancy. Work may or may not include architectural, plumbing, mechanical, electrical and Builder's Pavement Plan items. Note that playgrounds and parking lots also require Certificates of Occupancy. Amendments and additions can be filed as an Alteration Type 1.
- **Building Department Alteration Type II**
  The Building Department Alteration Type II is for alterations with no change to existing egress or use or occupancy and that do not require change of the Certificate of Occupancy. Work may include architectural, plumbing, mechanical, boiler, fuel burning equipment, fuel storage, standpipe, sprinkler, fire alarm, fire suppression and construction equipment items.
- **Building Department Alteration Type III**
  The Building Department Alteration Type III is for minor work items not covered by Alteration Types I and II. Work may involve minor architectural items, construction equipment and such changes as curb cuts. Note that amendments and additions can not be filed under this type of alteration.
- **Alteration Repair Application (ARA)**
  Alteration Repair Application (ARA-1) for minor plumbing work with maximum cost of $14,000 can be filed solely by a Licensed Plumber. In addition, minor sprinkler work (to $10,000) and minor oil burner installation (to $14,000) can be filed by a licensed plumber.
- **Equipment Use Permit (EUP)**
  Applications for Equipment Use Permits need to be filed for the installation of all mechanical equipment including air conditioning, refrigeration and fire suppression systems such as ANSUL.

- **Material and Equipment Approval (MEA)**
  All materials and equipment, both designed and selected, requires Material and Equipment resolution and approval by the MEA Division of the Building Department.
- **Certificate of Occupancy (C. of O.)**
  In order to assure that buildings are safe for public use, Certificates of Occupancy are issued upon completion of construction, the submission of inspection reports, and with approvals of all required documentation.
- **Temporary Certificate of Occupancy**
  Temporary Certificates of Occupancy are issued when the Department of Buildings determines that the building or portion of the building is safe for public use, though all approvals and inspections may not be complete.
- **Public Assembly Permit (PAP)**
  In order to safely accommodate more than seventy-four persons in a given space or room, Public Assembly Permits are issued only upon satisfactory completion, inspection and submission of approvals of all required documentation.
- **Bureau of Electrical Control (BEC)**
  The Bureau of Electrical Control (BEC), a separate entity under the jurisdiction of the Building Department, issues permits and certificates for all electrical work. Filing of electrical work must be done by an electrical Contractor licensed in New York City.
- **Controlled Inspections**
  All Controlled Inspections shall be paid for and furnished by the Department of Design and Construction. For each project DDC will indicate the Contractor responsible for the Controlled Inspection. The Consultant is responsible for marking all items that need inspection on the TR-1 form. To allow time for obtaining signatures, the Consultant shall provide a 75% complete set of drawings and a completed TR-1 form four weeks before the intended submission to the Building Department. If the Consultant fails to provide a timely TR-1 form, the Consultant shall be responsible for filing the initial TR-1 forms. Subsequent to filing, DDC will designate the Controlled Inspection Contractor who will perform the Controlled Inspection. At that point the Consultant will be relieved of these duties with regard to the Building Department. The Consultant shall not list items for Controlled Inspection when the stress levels are below the provisions of the New York City Building Code. When the Consultant delivers to DDC a marked but unsigned TR-1 form three months in advance of the final submittal of the project, the Controlled Inspection Contractor will sign the initial TR-1.
- **Builder's Pavement Plan Unit**
  The Builder's Pavement Plan Unit of the NYC Department of Transportation and the Buildings Department reviews and approves paving plans. Street and sidewalk approvals are required for permanent Certificates of Occupancy. Paving plans must show sidewalks, street trees, curbs, roadway work, street modifications, sidewalk vaults, roadway vaults, drainage across sidewalks, and planned legal sidewalk, road and curb elevations, as established by the NYC Department of Transportation or by official waiver of legally established grades.

3. Department of Transportation

The Department of Transportation is responsible for operations relating to New York City streets, bridges and tunnels, and the issuance of necessary permits. These include review and approval, as necessary, by:

- **Bureau of Highway Operations**
  The Bureau of Highway Operations issues permits relating to the maintenance and repair of public roads, streets, highways, parkways, bridges and tunnels.

- **Street and Sidewalk Construction Activities**
  Permits are required, and to be taken out by the Contractor for street closings, sidewalk construction including protective bridges and other similar construction operations. The Consultant may be required to prepare necessary drawings.
- **Office of Revocable Consent**
  Approval from the Office of Revocable Consent of the Department of Transportation is required for any construction extending beyond the property line, either above or below street level. It is also required for other work, including the construction of bridges over streets and tunnels or utilities under roadways. Any above ground work requiring revocable consent will, in addition, require the approval of the NYC Art Commission.

4. Transit Authority

If the proposed construction could infringe upon or adversely affect the structure of the subway system, it will be necessary to receive the approval of the New York City Transit Authority prior to submitting plans for approval by the Building Department.

5. Fire Department

The Fire Department, Bureau of Fire Prevention enforces all laws and rules pertaining to the prevention of fires. The Bureau of Fire Prevention issues:

- **Blasting permits and Certificates of Fitness**
- **Violations for non-compliance with the Fire Code**
- **Approvals for fire alarms, smoke detectors, gasoline and diesel oil tanks, halon systems and fire suppression systems, including ANSUL for kitchens**

6. Department of Environmental Protection

The NYC Department of Environmental Protection enforces all laws and rules pertaining to air quality, water quality and hazardous materials and includes:

- **Bureau of Air Resources**
  The Bureau of Air Resources which approves use of equipment that involves emission into the atmosphere.
- **Bureau of Water and Sewer Operations**
  The approval of the Bureau of Water and Sewer Operations, if applicable to the project, is required in order to obtain the Building Department approval. Its Cross Connection Unit provides water pressure tests for new connections of sprinkler systems and approves the reduced pressure zone (RPZ) and backflow preventor installations, when required, as well as new service for water connections.
- **Asbestos Control Program**
  Forms must be submitted to the Department of Environmental Protection through the Department of Buildings for the Asbestos Control Program. If the project requires no filing with the Building Department, the Consultant must nevertheless file the appropriate Asbestos Control Program form with the Department of Environmental Protection. If the project requires filing with the Building Department, Form ACP-5 will be required if little or no asbestos is present, and Form ACP-7 is needed if asbestos is present. The Consultant or relevant subconsultant has responsibility for identifying potential areas of asbestos containing material and preparing drawings and specifications which will allow for removals.

7. Department of Parks and Recreation

The Department of Parks and Recreation approves projects within parks or designated park land, and approves street trees and planting regulations.

8. Department of Health

The Department of Health approves food handling equipment and swimming pool facilities. Health Department regulations also pertain to other types of facilities such as day care centers.

9. Department of Sanitation

The Department of Sanitation approves refuse disposal methods, including but not limited to the disposal of special refuse.

10. Environmental Control Board

The Environmental Control Board administers violations and fines for some of the violations also under the jurisdiction of the Building Department, the Fire Department and the Department of Parks and Recreation, including, but not limited to, damage to street trees

11. Department of Business Services

The Department of Business Services reviews and approves construction adjacent to the waterfront.

12. Utility Companies

Utility companies review and approve applications for electric, gas, steam, water and sewer connections. Consultants are also expected to be aware of and apply for energy conservation incentive programs.

13. Community Planning Boards

The Community Planning Boards review and make recommendations pertaining to projects located within geographic boundaries. The DDC Project Manager may request Consultants to present new buildings, major additions and landscape projects to the appropriate Community Board. Community Planning Board notification and approval may be required by the Art Commission.

14. Uniform Land Use Review Procedure (ULURP)

Consultant services may be required for the Uniform Land Use Procedure. These services, if requested for particular projects, shall be addressed in the Specific Requirements or Task Order.

15. Art Commission

The NYC Art Commission regulates work proposed for artwork, buildings, and sites not within the jurisdiction of the Landmarks Preservation Commission. See Section D below for details on the application requirements and the approval process.

16. Landmarks Preservation Commission

The NYC Landmarks Preservation Commission regulates work proposed for designated buildings, interiors, sites and historic districts. Before commencing design, the Consultant shall check the designation status of the property by calling DDC's Historic Preservation Office. See Section E below for details on the application requirements and the approval process.

D ART COMMISSION APPROVAL

1. Background Information

- **Responsibility**

  The New York City Art Commission is the division of the Mayor's Office responsible for the review and approval of works of art, architecture, landscape architecture, urban design and street furniture on City-owned property. The Art Commission reviews a wide variety of projects for aesthetic appropriateness. They include construction and restoration of buildings, playgrounds, installation of lighting, distinctive sidewalks, and the design, installation, removal and conservation of artwork.

- **Composition**

  The Art Commission consists of eleven unpaid commissioners and a staff headed by an executive director. According to Chapter 37 of the New York City Charter, the Art Commission shall include an Architect, a Landscape Architect, a Painter, a Sculptor and three lay members nominated by the Fine Arts Federation and appointed by the Mayor. The Art Commission also includes representatives of The Metropolitan Museum of Art, The Brooklyn Museum, the New York Public Library and the Mayor.

2. Meetings

Commissioners convene monthly for public hearings, meetings and site visits. They review, discuss and vote on art and construction projects proposed for City-owned properties, address general policy issues and establish guidelines for future designs. In addition, a committee meets monthly to review particular items and to make recommendations to the full Commission.

- **History**

  The Art Commission was established in 1898 with the consolidation of the City of New York and in the spirit of the turn-of-the-century City Beautiful movement. The Commission was included in the City Charter as an objective body that would ensure the best quality of design possible for projects on public property.

3. Jurisdiction

The New York City Art Commission reviews works of art and structures, including architecture, landscape architecture and street furniture on City-owned property. In 1995, with the passing of Local Law 77 and revision of the New York City Charter, certain overlapping jurisdiction between the Art Commission and the Landmarks Preservation Commission was eliminated. If approval of a structure primarily concerns a landmark site, a landmark interior, an existing building within a scenic landmark, or an action within an historic district, and a report or determination by Landmarks is required as a result of Local Law 77, then the Landmarks Preservation Commission will conduct the review. Art Commission review is nonetheless required in the following instances:

- **Projects**

  Review of all art, architecture and landscaping projects on City-owned property, unless it is a landmark, a landmark site, a landmark interior, an existing building within a scenic landmark or an action within an historic district.

- **Scenic Landmarks**

  All projects within scenic landmarks, except for work on existing buildings, require review and approval by the Art Commission.

- **Artwork**

  All proposals involving works of art on City-owned property, wherever situated, will require Art Commission review and approval. The term "work of art" includes, but is not limited to, all sculpture, paintings, mural decorations, mosaics, stained glass, statues, carvings or castings in high and low relief, inscriptions, monuments and fountains. It also includes

conservation of artworks. Conservation, relocation and removal of artwork is subject to Conservation Advisory Group (CAG) review.

- **Examples**
  Examples include but are not limited to new buildings, additions, exterior ramps, window replacements, exterior lighting, street furniture, distinctive pavement, steps and curbing, landscaping, and signage other than regulatory traffic signage. Only routine maintenance work and replacement-in-kind projects do not require Art Commission review and approval.
- **Replacement-in-Kind**
  When the entire Scope of Work involves the replacement of building elements or landscape features with new materials of the same design and appearance, projects do not have to be presented before the Art Commission. DDC determines and notifies the Art Commission of all replacement-in-kind work.
- **Community Board Approval**
  The New York City Art Commission may request Community Board notification and, when possible, approval, of projects prior to presentation. The scheduling of such presentation will be coordinated with the DDC Project Manager. Background information about the building or site project shall be prepared by the Consultant for such Community Board meetings.

4. Pre-Submittal Meeting

The Department of Design and Construction officially submits all projects to the Art Commission, with materials prepared by the Consultant. The Consultant is required to make presentations at the Art Commission, including meetings of the Committee, typically the third Wednesday of each month, and to the full Commission, typically the second Monday of each month. Projects are presented for preliminary approval at or near the end of Schematic Design and final approval at or near the end of Final Design.

A pre-submittal meeting is held at DDC to review the design quality and completeness of the application materials at least one week prior to submittal deadlines set by the Art Commission. These meetings include the Consultant and the Director of Architecture and the Art Commission Liaison. When possible the DDC Project Manager, Team Leader, and the Client Agency representative also attend. After approval by the Director of Architecture, the Consultant delivers materials to the Art Commission offices prior to the submittal deadlines as set by the Art Commission. These are generally one week prior to Committee meetings and two weeks prior to hearings of the Full Commission.

5. Submittal Requirements for Preliminary Approval

- **Schematic Design Drawings**
  -Including relevant plans, elevations and sections. Three sets of selected architectural plans, elevations and sections are required, one set mounted and two rolled
- **Six Site Photographs**
  Digital images, Polaroid photographs and color photocopies are not acceptable. Two sets of each photo are required, one set mounted, and one set in a labeled envelope. Mounted photographs on boards are brought to the Art Commission the day of the presentation. The set of labeled non-mounted photographs shall accompany materials submitted in advance of the presentation.
- **Application Form**
  -With information completed by the Consultant and signed by the Director of Architecture as applicant
- **Rendering**
  -If applicable
- **Model**
  -If applicable, brought to the Art Commission the day of the presentation

- **Material and Color Samples**
  -Are highly recommended. Presentation of building elevations and landscape plans are greatly facilitated by having material and color samples on hand at the initial presentation. For renovation and addition projects, samples of existing materials or of materials that approximate existing conditions are most useful to inform the discussion of design choices.

6. Submittal Requirements for Final Approval

- **Final Contract Drawings**
  -Including relevant plans, sections and elevations. Three sets of selected architectural plans, elevations and sections are required; one set mounted and two rolled
- **Application Form**
  -With information completed by the Consultant, and signed by the Director of Architecture as applicant
- **Rendering**
  -If applicable
- **Model**
  -If applicable, brought to the Art Commission the day of the presentation
- **Material and Color Samples**
  -Are required as well as a listing of all materials to be used on the exterior, with manufacturers' names, product numbers and color indications given on an 8½" x 11" sheet.

7. Amended Final Approval

After approval by the Art Commission of the Final Design, any revisions to the areas of the project over which the Art Commission has jurisdiction shall be brought back to the Art Commission for Amended Final Approval. Graphic indication of the areas changed, including changes in materials, shall be shown in comparison with the prior previously approved Final Design. A new signed application form is required.

8. Simultaneous Preliminary and Final Approval

Projects that are relatively simple can receive simultaneous Preliminary and Final Review by the Art Commission. This approach needs to be determined by DDC before the end of Schematic Design. All submittal requirements necessary for each approval, including details and materials, must be presented.

E LANDMARKS PRESERVATION COMMISSION APPROVAL

1. Background Information

- **Responsibility**
  The Landmarks Preservation Commission is responsible for designating and protecting the landmarks of New York City. The Commission was created in 1965 by the Landmarks Law, Section 3020 of the New York City Charter and Chapter 3 of Title 25 of the Administrative Code. The agency consists of eleven commissioners and a staff headed by an executive director.
- **Purpose**
  The objective of designating landmark properties is to "safeguard the city's historic, aesthetic, and cultural heritage" and to "foster civic pride in the beauty and accomplishments of the past." Protection of designated properties is achieved through mandatory review and approval of plans for restoration, alteration, addition, re-construction or other proposed changes.
- **Jurisdiction**
  The Landmarks Preservation Commission has jurisdiction over all properties that are either designated or pending designation as NYC landmarks. The four types of landmark designations are individual (exterior), interior, scenic and historic districts. In addition, the Landmarks Preservation Commission may perform regulatory and review functions for projects under City Environmental Quality Review (CEQR). Properties so reviewed might be designated as landmarks by New York State or on the National Register even if they are not New York City designated landmarks. CEQR review covers historic, aesthetic, cultural, archaeological and architectural resources.
- **Coordination between LPC and the Art Commission**
  Areas of overlapping jurisdiction between the Landmarks Preservation Commission and the Art Commission have been simplified with the adoption of Local Law 77. Projects with landmark status, as outlined above, will be submitted to the Landmarks Preservation Commission. If the project primarily concerns a landmark, or a landmark issue, the Landmarks Preservation Commission will conduct the only design review, and Art Commission review will not be required. For these projects Landmarks Preservation Commission review and approval will be binding.

2. DDC Historic Preservation Office, Architecture Unit

The DDC Historic Preservation Office assists and guides all steps leading to approval of the project by the Landmarks Preservation Commission and by other entitites having jurisdiction over historic properties such as the SHPO. The DDC Historic Preservation Office should be contacted at the outset of projects potentially within the jurisdiction of the LPC to verify the designation status of the property. Assistance is provided throughout the application and approval process, and HPO may also monitor the job during construction. The schedule of submission deadlines and hearings will be available at the DDC Historic Preservation Office. Please note that "landmark quality" properties also are identified by the DDC Historic Preservation Office. See Historic Preservation Design Criteria in Chapter I of this Guide for details.

3. Procedures

Typically, the Landmarks Preservation Commission approval requires two submissions. The first is for preliminary approval at the end of the schematic design, and the second submission is for the final design approval, when pertinent construction documents are complete. It is important to involve the Commission early in the project. A Landmarks Preservation Commission staff member will be assigned to the project, and the likely level of action, either

staff review or public hearing, will be established. It is also useful to discuss the scope of work and get advice on appropriate presentation materials. Initial contact could be by telephone or by a meeting, depending on the nature of the project. The submission procedure is as follows:

- **Prepare for Presentation**
  The Consultant shall obtain a sample application form from the DDC Historic Preservation office. The Consultant then prepares all materials for presentation to the Landmarks Preservation Commission and transmits required materials to the LPC and to the Department of Design and Construction.
- **Pre-Submission Meeting**
  The Department of Design and Construction officially receives and reviews the Consultant-prepared materials at a pre-submission meeting held at DDC at least one week before submission deadlines. This meeting includes the Consultant, staff of the DDC Historic Preservation Office, the DDC Project Manager and Team Leader and the Director of Architecture.
- **Delivery of Submission**
  After approval by DDC, the Consultant delivers required submission materials to the Landmarks Preservation Commission.
- **Presentations to the Landmarks Preservation Commission**
  Accompanied by DDC staff and the Client Agency Representative, the Consultant is required to make presentations to the Landmarks Preservation Commission staff and at public hearings.
- **Timeframe for Landmarks Preservation Commission Determination Report**
  The submission must be deemed complete by the Landmarks Preservation Commission staff who then have up to forty-five working days after submittal to issue a determination report.

4. Submittal Requirements for Preliminary Approval

Two sets are required for the Landmarks Preservation Commission and two sets for DDC of:

- **Application Form**
  The Application Form prepared by the Consultant, coordinated by the DDC Historic Preservation Office, and signed by the Director of Architecture as "Person Filing Application," and the Assistant Commissioner of A+E as "Owner."
- **Schematic Design Drawings**
  The Schematic Design drawings including relevant floor plans, building sections, exterior elevations and details.
- **Research**
  Relevant research, test reports and documentation
- **Existing Conditions**
  Existing condition photographs and drawings as well as contextual photographs. The first set must be original prints.
- **Rendering**
  A rendering and site line drawings or perspectives, if applicable.
- **Samples**
  One set of material and color samples and related product literature and identification specifications are required.

5. Submittal Requirements for Final Approval

Two sets are required for the Landmarks Preservation Commission and two sets for DDC of:

- **Application Form**
  Application Form prepared by the Consultant, coordinated by the DDC Historic Preservation Office and signed by the Director of Architecture as "Person Filing Application," and the Assistant Commissioner of A+E as "Owner."

- **Final Design Documents**
  Final Design Drawings, including relevant floor plans, building sections, exterior elevations, details and specifications
- **Samples**
  One set of material and color samples as well as related product literature and specifications is required.

6. Simultaneous Preliminary and Final Review

Projects that are relatively simple can receive simultaneous Preliminary and Final Approval. This approach needs to be determined by the Department of Design and Construction at the end of Schematic Design. The DDC Historic Preservation Office will verify this with the Landmarks Preservation Commission staff prior to submittal.

F VALUE ENGINEERING APPROVAL

The Specific Requirements or Task Order will specify if Value Engineering studies or workshops will be conducted for a particular project and, if so, how many and at which phases of the projebbbct. Typically the Office of Management and Budget designates complex projects with an estimated construction value in excess of *thirty* million dollars for such analysis.

1. Participation

The Consultant shall participate in a maximum of three Value Engineering studies to be performed by a Value Engineering Consultant team engaged by the City under separate contract through the Office of Management and Budget.

- **Phases**
  The Consultant shall fully cooperate with the Value Engineering Consultant and shall supply all requested data during each of these studies. Value Engineering Studies may be conducted at the conclusion of Pre-Preliminary Design, Schematic Design and Design Development.
- **Workshop Data**
  As part of each study, the Value Engineering Consultant will conduct a workshop lasting a maximum of five consecutive days. Prior to each study, background data will be needed. The Consultant shall make every effort to comply with requests for data and supply necessary materials in a timely manner.
- **Orientation Meeting**
  The Consultant's technical personnel will meet with the Value Engineering Consultant, the Office of Management and Budget and DDC so as to allow the Value Engineering Consultant to explain the study process. In addition, the Value Engineering Consultant will review the role, activities and responsibilities of the Consultant and the City in relation to the study process.
- **Data at Outset**
  The initial meeting will also allow for consideration of project constraints and for the updating of information submitted by the Consultant to the Value Engineering Team on any aspect of the design concept. In addition there may be need to further identify project constraints, provide additional documents or other information, as needed, which the Value Engineering Consultant may request in order to proceed with the study.

2. Schedule

- **First Day**
  At the beginning of the first day of each study workshop, the Consultant shall make available appropriate design team personnel from the Consultant's office and those of relevant Subconsultants in order to make a design presentation and to respond to questions.

- **Duration**
  For the remainder of the Value Engineering study, the Consultant shall make the design team available to answer questions in person, by electronic mail, or by telephone. In addition, the Consultant will be requested to attend a brief mid-workshop meeting with the Value Engineering Consultant, to identify and discuss alternatives.
- **Last Day**
  On the last day of the workshop, the Consultant shall attend a meeting at which the Value Engineering Consultant will present various proposed alternatives and recommendations.

3. Recommendations

The recommendations resulting from the Value Engineering studies shall be submitted to the City in the form of a Draft Report within five working days after the last day of the review

session. The Consultant shall prepare a written response to each Value Engineering recommendation received. The response shall be submitted to the DDC Project Manager.

4. Modifications

Modifications to the Consultant's documents resulting from the recommendations by the Value Engineering Consultant shall be performed by the Consultant when directed in writing by the Department of Design and Construction after consultation with the Office of Management and Budget and the Client Agency.

5. Compensation

In accordance with contract provisions for extra work, the Consultant shall be compensated for any re-design necessitated by scope change, for orientation and attendance at Value Engineering meetings, study workshops and the presentation of study results by the Value Engineering Consultant.

6. Reimbursement

Reimbursement will not be made for any additional work that is normally part of the project responsibilities of the Consultant. These may include:

- **Extra Work**
  Extra work resulting from or necessitated by error, omission or oversight on the part of the Consultant, as determined by the Department of Design and Construction. Such errors or omissions may be of design, analysis, calculations, layout, drawings or reports.
- **Design Changes**
  Work resulting from design changes that are needed to meet scope requirements more effectively, as determined by the Department of Design and Construction, will not be reimbursable charges
- **Attendance**
  Attendance at meetings with representatives of agencies whose approval is normally required

IX. GENERAL INFORMATION AND FORMS

IX. GENERAL INFORMATION AND FORMS

A GENERAL INFORMATION

1. Design

- **Consultant Recommendations**
  The Consultant shall make recommendations necessary to supplement the Specific Requirements or Task Order so as to achieve an efficient design. The Consultant shall bring to the attention of the DDC Project Manager, in writing, any additional work or scope reductions that may be needed to assure proper use and occupancy.
- **Program Changes**
  The Consultant shall not make any change in the program requirements or scope of the project without authorization from the Department of Design and Construction.
- **Design Responsibility**
  The Consultant shall follow appropriate architectural, landscaping and engineering practices in designing the project and preparing design and construction documents. The Consultant is responsible for the design, checking, cross checking, coordination and cross-referencing of the project design documents. Any review undertaken by the Department of Design and Construction or other agencies of the City of New York shall not eliminate, substitute for, or reduce the Consultant's responsibility for their work.
- **Compliance to Code**
  The design shall comply with all applicable building codes, zoning regulations, laws, guidelines and other requirements of New York City, New York State and Federal Agencies having jurisdiction over any phase of the work. If regulatory requirements change during the course of the project, the Consultant is responsible for informing the DDC Project Manager and seeking a resolution to the related design issues.
- **Existing Conditions**
  The Consultant shall be familiar with existing conditions at the project site throughout the design period of the Contract, to ensure that all drawings and specifications accurately reflect current conditions.
- **Topographical and Property Data**
  The Consultant shall submit to DDC, as early as possible during design, all requests for topographical and property line maps. These requests shall be based on observations of existing site conditions. The Department of Design and Construction will furnish necessary information.
- **Consultant's Interpretations**
  The Consultant shall be available for required interpretations of plans and specifications, and shall promptly advise the DDC Project Manager of problems with or conflicts among drawings, specifications and site conditions.
- **Subconsultant Use**
  The Consultant shall assure that each subconsultant is aware of and complies with the contents and requirements of this Guide, as it pertains to their responsibilities under the Contract.

2. Schedules

- **Initial Schedules**
  The Consultant shall prepare a Bar Chart or Critical Path schedule indicating how to achieve the project phase durations established by the DDC Project Manager at the outset of the project. Standard durations for design and construction phases for DDC projects have been established and are available from the DDC Project Manager. The Consultant's initial schedule shall indicate completion dates, including review time as established in the Specific Requirements or Task Order for the Pre-Preliminary, Schematic Design, Design Development and Final Design phases of the project. The initial schedule will be submitted

by the Consultant at the Design Kick-Off meeting, and will be discussed at that meeting. Schedules shall meet DDC requirements and be resubmitted as necessary until agreement has been reached on all issues raised. With the written agreement of the DDC Project Manager, schedules will be revised by the Consultant to reflect any necessary changes in the project. The Consultant shall be responsible for adhering to the approved project schedule.

- **Standard Durations**
  The Consultant shall adhere to the Standard Durations for design phases as developed by the Department of Design and Construction. Any deviation from these durations will be described in the Specific Requirements or Task Order, or communicated by the DDC Project Manager at a Pre-Proposal Meeting or during Task Order fee discussions.
- **Checklists**
  The Consultant shall prepare a complete list of all the activities required for the successful and timely completion of the contract. The checklist must be prepared by modifying and supplementing a sample list furnished by the DDC Project Manager. For each item, the start and completion dates of the activity must be stated, either as absolute dates, or in relation to the scheduled start and completion dates of the major phases of the project. Particular attention will be paid to concurrent activities. Slack periods shall be indicated. Checklists shall be submitted and updated whenever the schedule is changed or as necessary to maintain the approved project schedule.
- **Progress Reports**
  Progress Reports showing the status of the work shall be submitted monthly, by the 25th of each month. If progress is delayed, the report shall state the reasons for the such delay and plans for making up the time and resolving related problems contributing to the delay.
- **Filing and Approval of Reports**
  The Consultant shall prepare and submit the Approval Report Form, PA-1, indicating all filing with regulatory agencies, all approvals needed and all agencies from which approvals must be obtained. All required Controlled Inspections shall be noted on Form PA-1 as well as on the drawings.
- **Controlled Inspections**
  The Consultant is required to indicate the items to be subject to Controlled Inspection on the TR-1 Form and to provide appropriate signatures. Before construction kickoff, DDC will designate the entity responsible for Controlled Inspections. At that time a revised TR-1 form will relieve the consultant of responsibility. The Department of Design and Construction will generally provide Controlled Inspections by means of a separate Requirement Contract or through a Construction Management contract.
- **DDC Approval of Subconsultants**
  The Department of Design and Construction reserves the right of approval for all subconsultants and Consultants for specialty contracts. Such subconsultant firm names and relevant information including SF254 and SF255 forms shall be submitted by the Consultant to the DDC Project Manager for approval at or before the Design Kick-off Meeting.

3. Budget and Cost Estimating

- **Changes in Cost Estimates**
  In addition to the updated CSI-format cost estimates to be submitted at each project milestone, the Consultant shall maintain current information relating to the estimated cost of the project throughout the design period. The Consultant shall inform DDC promptly in writing of any significant changes in such estimated cost, due to market conditions or changes in the scope of work or design of the project.
- **Cost Management Program**
  A cost management program shall be maintained throughout the course of the project. The Consultant must keep track of any changes in the project scope, quantities, material and labor costs, or any other project related costs. These may also include additional items such

as construction phasing, premium work time and temporary relocation of existing facilities.

- **Approval of Cost Estimating Subconsultant**
  The Consultant shall engage a competent cost estimating firm to prepare cost data and required estimates, at its own expense, unless the DDC Project Manager approves the use of the the Consultant's in-house cost estimating staff in writing. The name of the cost estimating Subconsultant shall be submitted in writing to the DDC Project Manager for written approval prior to the completion of the Schematic Design.
- **Form of Cost Estimate**
  All cost estimates prepared for DDC must be in approved Construction Specifications Institute (CSI) format including division and section names.

4. Site Data

- **Requests for Surveys**
  The Department of Design and Construction shall furnish surveying and subsurface information to the Consultant when required by the site conditions of the project. The Consultant shall request necessary subsurface data from the DDC Project Manager within two weeks of the Design Kick-Off Meeting. The level of detail requested by the Consultant shall be verified by the DDC Site Engineering Unit before the start of surveys.
- **Surveys**
  Surveys may consist of topographical and property line maps, showing legal grades, street utilities, reference benchmarks and a baseline.
- **Subsurface Information**
  Subsurface information may include test borings, watertable determinations, taking soil and rock samples and performing physical tests, complete with written results.
- **Consultant's Responsibility**
  The furnishing of site information by DDC shall in no way limit the responsibility of the Consultant to properly analyze the documents and data furnished, and develop suitable project solutions in accordance with the best professional practices. Any additional information required shall be requested from the DDC Project Manager in writing, as early as possible. See also Criteria for Structures and Soil in Section I.
- **Examination of Site**
  The Consultant shall examine the designated site, noting all conditions pertaining to the completion of the construction of all phases of the project. The Consultant shall promptly bring to the attention of the DDC Project Manager conditions on adjacent sites which are potentially hazardous or might be prone to damage. Similarly, the Consultant shall notify DDC of any inadequacy or uncertainty regarding the facilities or utilities, or other reasonably discoverable impediments, which might prevent the orderly and expeditious construction of the project.
- **Reference to Surveys**
  The Consultant shall design and plan the work in conformance with available information concerning existing lines, grades, levels, sewers, and subsurface structures, conditions and facilities.
- **Examination of Public Records**
  In addition to a review of surveys, the Consultant may be required to undertake a thorough site inspection and an examination of all relevant public records. Additional information and investigations may be required as site conditions dictate.
- **Boring Location Plan and Soil Samples**
  The Consultant shall be responsible for the preparation of boring location plans, and for the selection of any specimen soil samples for analysis by laboratory testing.
- **Reimbursement of Costs**
  Any material furnished by the DDC to meet the requirements of the project shall be at no cost to the Consultant. The Consultant shall be reimbursed, at cost, for any DDC

requirement to obtain topographical and property line surveys, borings, and soil testing and rock testing.

5. Hazardous Condition Rating

All inspection reports, including those pertaining to building facades, shall use a rating system to classify the results of the inspection. The rating system definitions shall be indicated in each report and shall conform to the Structural Condition Ratings described in Section I.

6. Alteration of Existing Structures

- **Consultant to Verify Existing Conditions**
  When the project involves alteration of or addition to an existing structure, the Consultant shall be responsible for verifying all measurements and details of existing construction, and documenting same for all areas of affected work. The Consultant shall verify, through visual examination and physical measurement, the accuracy of all drawings, specifications and data concerning the existing structure furnished by DDC. Documentation from other sources and Building Department records shall also be checked. The Consultant is put on notice that construction change orders and disputes most frequently arise from field conditions that have not adequately been surveyed or documented. Inadequate examination of existing conditions leads to the largest number of design service Errors and Omissions claims. The Consultant is strongly urged to make the most diligent effort to verify existing conditions, both visible and concealed.
- **Amount and Locations of Probes**
  The Consultant shall be responsible for specifying the number and locations of probes needed to adequately investigate concealed construction. See also Investigation Criteria for Structures and Soil in Section I.
- **Notification and Identification of Probe Locations to DDC**
  The Consultant shall be responsible for identifying and notifying DDC of all locations where the proposed design will disturb, intersect with, or affect any component of an existing building or facility. This identification must be in writing, and be accompanied by drawings acceptable to DDC, which clearly convey the required information.
- **Hazardous Materials Survey and Documentation**
  Unless otherwise established in the Specific Requirements or Task Order, the Consultant will arrange for surveys to determine whether or not there are hazardous materials within the project area. DDC requires these services to be performed by the Consultant or approved Subconsultant. The Consultant or approved Subconsultant will integrate plans and specifications for the removal, handling, and disposal of hazardous materials into the Bid Documents.
- **Compensation for Additional Services**
  If existing construction proves to be at significant variance with the construction as indicated in as-built drawings on hand, subject to the prior approval of the Office of Management and Budget and DDC, the Consultant may be compensated for additional services as stipulated in the Agreement. Such compensation shall relate to the cost of undertaking new as-built drawings.
- **Salvage Program**
  The Consultant shall, in coordination with the salvage program of the Landmarks Preservation Commission, provide for the salvage of architecturally noteworthy and re-usable building elements that are to be removed as a result of alteration. The Consultant shall photograph items accepted by the DDC Project Manager and DDC Historic Preservation Office reviewer. These items shall be specifically indicated on the demolition and salvage documents, with instructions to the Contractor as to protection and delivery to the Department of Citywide Administrative Services warehouse.

- **Furniture and Equipment for Re-Use**
  The Consultant shall prepare an inventory of existing furniture and equipment and complete an analysis for its re-use in the renovated structure.

7. Meetings

The Consultant shall inform the DDC Project Manager of all meetings pertaining to the project which the Consultant attends or plans to attend.

- **Progress Design Meetings**
  During the Pre-Preliminary phase, the Schematic Design, Design Development and Final Design, the Consultant shall attend regularly scheduled and other necessary meetings, and keep and submit minutes of these meetings, as directed by the DDC Project Manager.
- **Design Review**
  The DDC Project Manager shall invite the Design Review Team Leader and other DDC team members to the design progress meetings. This will help to reduce the need for formal response and resubmittal by the Consultant since potential review comments can be discussed in advance of milestone submittals. On-board review can also be requested.
- **Scheduling**
  Scheduling of meetings with the Client Agency or DDC technical staff shall be done through the DDC Project Manager.
- **Consultant's Schedule**
  Meetings shall be indicated on the Consultant's Schedule, and will include regular Design Progress Meetings, as directed by the DDC Project Manager. The Consultant may be required to attend or conduct meetings regarding issues such as programming, landscaping, site conditions, cost estimating, technical specialties, specifications, permits and approvals. Meetings may be required with the Community Planning Board, Landmarks Preservation Commission, Art Commission, and the Client Agency.
- **Job Meetings**
  During construction the Consultant shall attend job meetings at the site and other meetings as are reasonably required to interpret the Construction Documents.
- **Minutes of Meetings**
  The Minutes of Meetings shall be recorded by the Consultant for each design review and project meeting, and shall be submitted to the DDC Project Manager within three days after the meeting. The Consultant shall also record all job site project meetings unless there is a Construction Manager for the project. When recording minutes the Consultant shall number each meeting consecutively and record the date, place and attendees. The minutes shall include the agenda, all items discussed, conclusions and questions for resolution. The party responsible for the resolution of open issues, and the date the resolution is due should also be noted. Unresolved issues must continue to appear in the minutes until they are resolved. Resolution of open items shall be noted. Similarly, corrections and approvals of minutes shall be recorded. An updated Progress Schedule shall be attached to the minutes of each meeting. The Consultant shall transmit copies of the minutes to the DDC Project Manager, sufficient for all persons who regularly attend. In addition, the Consultant shall transmit a minimum of two copies of the minutes directly to the Client Agency. Certain projects may require that copies be sent to additional agencies, as directed by the DDC Project Manager.

8. Submittals

- **Submission of Documents**
  The Consultant is required to submit various Reports, Sketches, Drawings, Specifications and Progress Schedules at key project milestones. The content and level of detail required of each submittal, is described in the appropriate chapters of this Guide.

- **Review of Submission**
  All work submitted to the DDC Project Manager will be reviewed for conformance to DDC design criteria and the Client Agency requirements. Time required for reviews shall be incorporated into the Consultant's project schedule.
- **Computer Aided Design**
  Project drawings shall be developed on a CAD drawings system acceptable to DDC. Consultants shall be required to furnish CAD drawing files on diskettes in addition to the prints or mylars required when submitting Final Compliance Documents. Prior to commencing CAD work, the Consultant shall obtain approval from the DDC Project Manager, who will provide information from the DDC Management Information Systems concerning approved drawing system formats, symbols, fonts and line types.

9. Contract Adherence

- **Consultant Contract Administration**
  The DDC Project Manager is responsible for administering the Consultant's Contract. The Consultant shall not deviate from the terms of the Contract in any way, unless specifically authorized in writing to do so by the DDC Project Manager. Approved minutes of meetings will be considered authorization in writing, except for changes in the Scope of Work.
- **Request for Changes in the Scope of Work**
  Request for Changes in the Scope of Work shall be addressed in writing to the DDC Project Manager, and can only be incorporated into the project after approval by the Office of Management and Budget and the Department of Design and Construction through an authorized design change order.

10. Correspondence

Unless the Consultant is specifically directed otherwise, all correspondence shall be:

- **Addressed to:** (Name of Project Manager)
  Structures Divsion
  Department of Design and Construction
  30-30 Thomson Avenue
  Long Island City, New York 11101
- **Captioned with:** CAPIS ID Project Number
  Project Title and Location
  Contract Number
  Correspondence Subject

11. Telephone

The agency telephone number is 718-391-1000. All staff at the Department of Design and Construction can be reached with this number.

12. Publicity

- **Request for DDC Approval**
  Consultants are not to seek publicity for their work on DDC projects, nor submit DDC projects to newspapers, architectural journals, trade periodicals, design award programs or competitions, nor engage in similar activities that lead to publicity, without the written approval of DDC. All requests for such approval shall be made to the DDC Project Manager.
- **Project Material**
  Project material prepared by Consultants for publication, competition, or other activities shall first be submitted to DDC for approval.
- **Approvals Given**
  Approvals for Consultant-generated publicity materials will be given by the Department of

Design and Construction if there is no conflict with governmental publication plans or with policy considerations.

- **Requests**
  Unless the Consultant is specifically directed otherwise, all publicity materials for review and approval shall be addressed to the Project Manager as described above in this section.
- **Publicity Materials**
  The Consultant shall submit to DDC two slides and two 8"x 10" photographs of each board presented to the Landmarks Preservation Commission or the Art Commission. The mounted presentation boards may be retained at the Department of Design and Construction, which may use such materials for public information and for publication. The Consultant will be advised in advance of the intent to use such materials.

13. Energy Conservation

All facility designs shall conform, as a minimum, to the latest revision of the requirements of the New York State Energy Conservation Construction Code regarding the following:

- **Energy Analysis**
- **Component Performance**
- **Compliance Documentation**
- **Support Material**
  Support Material, such as analyses, calculations, vendor information and other data developed by the Consultant in support of recommended systems, components, equipment and materials shall be submitted to DDC, as part of the project review during the appropriate phase of the design.
- **Energy Financing**
  In the event that the Commissioners of a DDC project elect to seek ENCORE financing, design services shall include a simple payback analysis for proposed energy efficiency measures and participation in related meetings. ENCORE (Energy Cost Reduction) offers financing for energy saving measures from the New York Power Authority.

14. Additional Services

The Consultant may be required to perform "Additional Services" in addition to the "Basic Services" as outlined in the Specific Requirements and the Agreement. These supplemental services are also described in the Contract, as well as the methods and amount of compensation stipulated. The "Additional Services" may include but not be limited to the following:

- **Construction Services**
  Construction Services include all requested activities beyond the defined basic services during construction. Such services may involve increased participation at site meetings, field reconnaissance, special inspections, resident engineering and additional architectural services.
- **Full-time Project Representation**
  Full-time Project Representation covers the assignment of full-time site representatives to assure that the work conforms to the construction documents. Note, this may be included either as part of the Basic Services or Additional Services as indicated in the Specific Requirements or Task Order.
- **Controlled Inspections**
  The Consultant may be required to perform Controlled Inspections and tests and file these with the regulatory agencies. Controlled Inspections will normally be the responsibility of DDC, and will be performed through a separate Requirement Contract, or through the Construction Management Contract.

- **Planting and Tagging**
  -Selection and tagging of plant materials, and supervision of the planting operation by a Landscape Architect.
- **Probes, Surveys and Testing Services**
  Probes, Surveys and Testing Services includes probes to be performed for the purpose of investigating concealed construction, surveys performed for the purpose of verifying site conditions, and tests regarding material properties. Special testing is needed for historic and other older structures which include analysis of existing materials and finishes, treatment tests, and testing of treatment products and replacement materials.
- **Copying Contract Documents**
  -Printing additional sets of Contract Documents for bidding purposes.
- **Travel Services**
  -Authorized out of town travel to verify material sources, suppliers and fabrication.
- **Percent for Art Coordination**
  -Administering the Contract with an artist providing artwork for the project under the Percent for Art Program of the NYC Department of Cultural Affairs, if not required as a Basic Service.
- **Value Engineering Service**
  -Providing material for and participating in Value Engineering Studies.
- **Space and Furniture Planning**
  -Providing detailed furniture and equipment listings for purchase requisitions and installation supervision. This may be described in the Specific Requirements or Task Order.
- **Documentation**
  -Provision and reproduction of photos, drawings and other documents, which DDC may require for the project.

15. Performance Evaluation

DDC evaluates the performance of Consultants and subconsultants on each project at the end of the design phase and, if the Consultant provides Services During Construction, at the end of the construction phase as well. The evaluation becomes part of a City-wide database, and is used by DDC and other agencies in selecting Consultants. Evaluation is done by the DDC Project Manager, with input from the design review staff, and focuses on:

- **Design Quality**
- **Technical Proficiency**
- **Construction Document Quality**
- **Effective Communication with DDC and other Agencies**
- **Project Administration**

The Consultant receives a copy of the evaluation and can respond to it. The response becomes part of the Consultant's evaluation record.

16. Pass-Through Contracts

The design criteria, professional services and checklist of deliverables described in this Design Consultant's Guide also pertain to "Pass-Through" projects. On these projects, the management roles of DDC and of the Client Agency (including any specific client institution) may vary from standard projects; consequently, the supervision of the Consultant's work and the administration of the Consultant's contract may differ from standard projects. The roles and responsibilities of the agency, the client(s) and the Consultant will be appropriately defined for each pass-through project, but this in no way reduces the Consultant's responsibility to comply with this Guide.

B GUIDELINES FOR MULTIPLE CONTRACTS

1. Electrical Work Associated with HVAC and Fire Protection

- **Electrical Contractor**
  The Electrical Contractor shall furnish and install the power wiring to starters, motors and in-sight disconnects.
- **HVAC and Fire Protection Contractor**
  The HVAC/Fire Protection Contractor shall furnish, and the Electrical Contractor shall install, unless integral with the equipment, all starters and disconnects.
- **Furnishing and Installation**
  Furnishing and Installation of all control devices and all control and interlock wiring for equipment furnished under the HVAC/Fire Protection Contract shall be by that Contractor, including any power required for any control device. This power is to originate from a four-circuit panelette in each mechanical equipment room. If there is no electric panel in the room, the Electrical Contractor is to furnish and install this panelette.
- **Boiler**
  The Electrical Contractor is to provide a feed terminating in a junction box or disconnect. The HVAC/Fire Protection Contractor is to do all wiring from the junction box or disconnect to the boiler.
- **Boiler Plants**
  Where the Electrical Contractor is to do power wiring to specific equipment, details of that electrical work are to be shown on the electrical drawings.
- **Motor Control Centers**
  Motor Control Centers may be furnished by either the HVAC/Fire Protection Contractor or preferably the Electrical Contractor, but they must be installed and wired by the Electrical Contractor, except for external control wiring, which shall be installed and wired by the HVAC/Fire Protection Contractor.
- **Sprinkler Systems**
  Sprinkler systems, including flow and tamper switches are to be furnished and installed by the HVAC/Fire Protection Contractor. The Sprinkler Alarm Panel, and all wiring is to be furnished and installed by the Electrical Contractor, and must be shown on the Electrical Drawings.

2. Electrical Equipment Furnished under General Construction and Plumbing

Power and control wiring is to be furnished and installed by the Electrical Contractor, and must be shown on the Electrical Drawings.

3. Luminous Ceiling

Luminous ceiling is to be furnished and installed by the Electrical Contractor.

4. Lighting Fixture Supports

Lighting fixture supports shall be furnished by the Electrical Contractor and installed by the General Contractor.

5. Elevator Work

- **Elevator Disconnect**
  The Elevator Disconnect near the machine room entrance is to be provided by the Electrical Contractor. This includes the feeder and the controller. All other related elevator electrical and control work is to be provided by the elevator Subcontractor.
- **Electrical Contractor**
  The Electrical Contractor is to provide an electrical outlet box and telephone junction box at

the midpoint of the elevator shaft. The telephone junction box is to be connected with empty conduit to the nearest telephone strip box.

6. **Standpipe and Sprinkler Responsibilities**
   - **Plumbing Contractor**
     The Plumbing Contractor is to provide water service for the sprinkler, standpipe and combined standpipe/sprinkler systems, from the main up to and including the first Outside Stem and Yoke (OS&Y) valve and the detector check valve.
   - **Standpipes**
     The Plumbing Contractor shall provide the standpipe system, including the fire pumps, but not including sprinklers.
   - **HVAC and Fire Protection Contractor**
     The HVAC and Fire Protection Contractor is to provide the combined sprinkler/standpipe system and the separate sprinkler system from the detector check valve and including the fire and booster pumps. This work by the HVAC/Fire Protection Contractor, however, does not include the water service up to and including the detector check valve that is to be provided by the Plumbing Contractor.
   - **Electrical Contractor**
     The Electrical Contractor is to provide wiring.
   - **Coordinate all Requirements with DDC**
     Coordinate all requirements with DDC as these requirements relate to union jurisdiction in New York City.

7. **Fuel Tanks**
   - **HVAC and Fire Protection Contractor**
     The HVAC and Fire Protection Contractor shall furnish and install the fuel tanks, associated piping and miscellaneous controls for heating oil or emergency generators.
   - **Plumbing Contractor**
     The Plumbing Contractor shall furnish and install the equipment for gasoline or diesel fuel.
   - **Electrical Contractor**
     The Electrical Contractor is to provide power for any required pumps.
   - **General Contractor, HVAC/Fire Protection or Plumbing Contractor**
     The General Contractor, HVAC/Fire Protection or Plumbing Contractor is to provide for excavation, gravel, backfill, support pads and manhole access. A determination as to which Contractor shall do the work is to be made by DDC in conjunction with the Consultant.

8. **Contractor Responsibility**
   Each Contractor is to perform all necessary rigging, cutting and patching, excavation and backfill for the work of their Contract, unless otherwise specifically noted on the plans and specification by the Consultant.

9. **Access Doors**
   Access doors are to be furnished by the respective trades for installation by the Contractor for General Construction.

C DRAWINGS

1. Furniture and Equipment

For projects involving furniture and equipment, the Consultant is responsible for:

- **Space Planning and Design**
  The Consultant shall provide for the space planning analysis and design of the project in a responsive and professional manner. The Consultant shall be responsible for providing an acceptable and fully designed interior space using either a modular components system or loose furniture, or a combination of both in addition to all project specific equipment necessary to make the space functional. The Consultant's design shall optimize the quality of the interior space and environment; taking into account building safety, security, light and ventilation, compared with the proposed budget and the user's needs. If requested in the Specific Requirements or Task Order, re-use of existing available furniture and equipment shall be considered.
- **Guidelines**
  The project shall be designed based on the guidelines set forth herein and in the Client Agency's requirements. The proposed solution shall be fully coordinated with respect to the design of the building.
- **Qualifications**
  The Architect or Interior Designer, who performs this work, shall be approved by the Department of Design and Construction. If experienced staff is not available in-house, the Consultant may subcontract to an Architect or Interior Designer, or a furniture management firm, which must be approved by DDC.
- **Active DDC Requirements Contracts**
  The Consultant shall be responsible for selecting furniture and equipment items from current NYC Furniture and Equipment Requirements Contracts whenever possible, which shall be bid by the Department of Design and Construction.
- **Bid Furniture and Equipment**
  For those furniture and equipment items, which are not available from NYC Furniture and Equipment Requirement Contracts, the Consultant shall submit three manufacturers or vendors for each item to bid.
- **Work Not-in-Contract**
  Work Not-In-Contract shall include movable items such as wastebaskets and desk accessories, which are the sole responsibility of the user, and are not included in this work. Copiers, computers, facsimiles and other equipment shall be included in the Consultant's furniture layout. Specifications and acquisitions, however, are the sole responsibility of the Client Agency user.

2. Computer Aided Design

Project drawings shall be on a Computer Aided Design drawing system acceptable to DDC. Manual design drawings and sketches, normally prepared during Pre-Preliminary and Schematic Design phases, are acceptable exceptions.

Consultants shall be required to furnish CAD drawing files on CDs, in addition to the prints or mylars required, when submitting Final Compliance drawings for the final record or when otherwise required to do so by the DDC Project Manager. Provision shall be made for automatic quantity take-offs to be derived directly from the CAD drawing files. These shall be used to prepare final estimates. (See Chapter V, Final Design.)

3. Drawing Standards

- **Standard Sheet Sizes**
  Drawings shall be on sheets sized 24 x 36 inches, with minimum borders of two inches on

the left side and one half inch on the right side, top and bottom. Other sheet sizes will be permitted if required by specific project needs, and approved in writing by the DDC Project Manager.

- **Contract Indicated by Letter**
  Drawing numbers shall be consecutive within each contract, and be prefixed by the letter indicating the Contract to which the Drawings are applicable. Use the following letter designations:
  - **"A" Architectural Drawings**
  - **"B" Borings Record Drawings**
  - **"E" Electrical Drawings**
  - **"F" Fire Protection and Sprinkler Drawings**
  - **"H" HVAC and Fire Protection Drawings**
  - **"I" Interiors and Furniture Drawings**
  - **"L" Landscape Architecture Drawings**
  - **"P" Plumbing Drawings**
  - **"S" Structural Drawings**
  - **"T" Topographical and Property Line Drawings**
- **Addenda Drawings**
  Addenda Drawings are issued prior to bids being received and are to be numbered consecutively within each Contract.
- **Supplementary Drawings**
  Supplementary Drawings are issued after bids have been received and are to be numbered consecutively within each Contract.
- **Title Blocks and Signatures**
  Title Blocks and Signatures shall appear on drawings in locations called for in this Guide.
- **Lettering**
  Lettering shall be a minimum of 5/32" tall.
- **Addenda and Supplementary Drawings**
  Addenda and Supplementary Drawings shall bear, in pencil, the notation "PRELIMINARY-NOT FOR CONSTRUCTION", which will be removed by DDC prior to inclusion in the Contract Documents.
- **Media Type**
  -Polyester film, mylar, 3 mil minimum, pencil back. Use ink or plastic leads on polyester film, or equivalent CAD plotter medium.
- **Drawing Formats**
  Drawing formats are available from the DDC Project Manager and Team Leader. Use DDC Standard Title Sheet on all sets of Design Drawings and use DDC Standard Title Block on all Design Drawings.
- **Lettering**
  Renderings or illustrations, addenda and supplementary drawings are to be formatted by the Consultant. Note, however, that the DDC and the Client Agency names shall be at least ¾" high to allow for legibility after possible reduction to 8½"x11" format. No words shall be abbreviated.

4. Existing Conditions Drawings

Unless otherwise indicated in the Specific Requirements or Task Order, the Consultant shall:

- **Provide**
  Provide existing conditions drawings of all parts of the building to be affected by the proposed work. Field measurement and probing the buildings may be necessary.
- **Review**
  Review existing conditions drawings, prepared by others and provide a statement with regard to their adequacy and accuracy, verifying with field measurements and probes if necessary.

- **Reconcile**
  Reconcile existing conditions drawings with other documents listed in the Specific Requirements, or issued by the DDC Project Manager, and prepare a statement with respect to their correlation.
- **Augment**
  Augment existing conditions drawings, prepared by others, to provide a complete set to meet the stipulations of the Specific Requirements and the Building Code of the City of New York.
- **Ownership of Documents**
  The documents shall be the property of the Department of Design and Construction. A complete set of reproducibles on wash-off mylar (3 mil minimum thickness) shall be delivered to the DDC Project Manager at the completion of the Contract.
- **New York City Administrative Code**
  Drawings shall meet the applicable requirements of the New York City Administrative Code, Title 27, Chapter 1.
- **Legends**
  Drawings shall indicate and identify items in accordance with the appropriate legend.
- **Architectural Existing Conditions**
  Documentation of the Architectural Existing Conditions shall meet the requirements of the latest edition of the New York City Administrative Code, Title 27, Chapter 1, Subchapters 1-8, for: administrative and enforcement, definitions, occupancy and construction classification, building limitations, fire protection, means of egress, special uses and occupancies and places of assembly.
- **HVAC and Fire Protection Existing Conditions**
  Documentation of the Mechanical and HVAC Existing Conditions shall meet the requirements of 27-182 under "Plans Required" for the following:
  - **Air Conditioning and Ventilating Systems - except for index of ventilation**
  - **Elevators Locations - see only item #1**
  - **Fuel Burning and Fuel Oil Storage Equipment - except for item #6**
  - **Refrigerating Systems - all items**
  - **Heating System - all items broken down by system and subsystem**
  - **Boilers - all items**
  - **Standpipe - all items except for item #3 and item #4**
  - **Sprinkler System - show item #3, risers, pumps and valves; note affected area.**
- **Plumbing Existing Conditions**
  Unless otherwise noted, documentation of the plumbing existing conditions shall meet the requirements of 27-173 "Plans Required" for the following:
  - **Single Line Plan - except summation of loads**
  - **Typical Layout - not required**
  - **Riser Diagram - not required**
  - **New Plans - not required**
  - **All Appurtenant Equipment – related to plumbing conditions**
- **Electrical Existing Conditions**
  Documentation of the electrical existing conditions shall indicate the following according to the accepted IEEE legend of indications:
  - **Service Drop - AC, DC, Size**
  - **Meters - demand, AC, DC**
  - **Main Switch Gear - motor controllers and motors**
  - **Feeders - sizes**
  - **Panel Boards**
  - **Fire Alarms and Smoke Detectors**
  - **Safety Controls, Alarms and Systems**
  - **Lighting Fixtures and Wiring Devices**

- **Structural Existing Conditions**
  Documentation of the structural existing conditions shall meet the requirements of Title 27, Chapter 1, Subchapters 9-11 for loads, structural work and foundations.
- **Existing Condition Drawings Must Include:**
  - **Photographic Reproductions**
    -Of existing drawings to produce wash-off mylars.
  - **Master Set**
    -Produce architectural existing condition drawings as master set.
  - **CD**
    -One complete set on CD, whether in CAD format or image.

D BID DOCUMENTS

The following requirements are standard on projects that DDC directly issues for competitive bidding. It is essential that the Consultant prepare documents that are complete, fully coordinated, and free from ambiguities or inconsistencies. Special attention should be paid to coordination between the Specifications and the various schedules in the Addendum to the General Conditions. It is the responsibility and obligation of the Consultant to review documents prior to submission to DDC to ensure that all the criteria listed below are met. Compliance with this mandate will be reflected on the Consultant's performance evaluation.

1. Bid Booklet

In its review of the Bid Booklet, the Consultant shall address the following:

- **Bid Breakdown**
  Verify that the Contractor's Bid Breakdown Forms (blank cost estimate forms) are in CSI format, and that all quantities and values have been removed from the forms.
- **Special Experience Requirements**
  Special experience requirements must be approved in advance by DDC. Verify that such approval has been obtained and that the requirements are included in the Bid Booklet.
- **Bid Options**
  The use of Bid Options must be approved in advance by DDC. Verify that such approval has been obtained and that the bid forms for such options are in accordance with DDC's standard format for the same.

2. Addendum to the General Conditions

The Consultant must use the DDC General Conditions. To customize the General Conditions for a specific project, the Consultant must use the Addendum to the General Conditions. The Consultant will have been provided with a blank form of the Addendum to the General Conditions. This blank form has gray boxes which contain instructions to the Consultant for preparing each section of the Addendum.

- **Schedule A**
  The Consultant shall prepare Schedule A, which provides information on contract requirements, such as duration, liquidated damages, retainage, etc. The Consultant shall verify that this is correct and in accordance with the instructional material provided in the blank form of the Addendum to the General Conditions.
- **Schedule B**
  The Consultant shall prepare Schedule B, which is a list of Guarantees and Warranties that are included in the Specifications. The blank form of Schedule B contains a list of standard guarantees. The Consultant must revise this list so it is correct for the project. Such revisions must address the following: (1) delete any category of work not applicable to the project, (2) add new categories of work, if applicable, (3) provide Specification section numbers for all categories of work listed, and (4) lengthen the specified guarantee period, if appropriate.
- **Schedule E**
  The Consultant shall prepare Schedule E (Separation of Trades). The Consultant shall review the Specifications and the General Conditions for each of the items listed on Schedule E and shall ensure that the correct information is inserted as it pertains to each separate Contract.
- **Number of Contracts**
  DDC must approve the elimination of any trade contract, if the required work involves fewer than four prime contracts. Such approval should be obtained as early as possible.

3. Specifications

The Consultant must review the Specifications to ensure compliance with the following:

- **Compliance**
  Specifications prepared by Consultants must comply with governmental and legal requirements regarding public procurement. They include, without limitation, the competitive bidding laws of the State of New York, the Procurement Policy Board Rules of the City of New York and this Design Consultants Guide. To ensure compliance, it is essential that Consultants prepare specifications that are clear, accurate and in accordance with the criteria set forth below. Accordingly, specifications shall:
  - **Permit maximum competition**
  - **Permit the separate, competitive sealed bidding of each prime construction trade**
  - **Eliminate favoritism**
    Clearly describe the City's requirements without favoritism toward any contractor or supplier or to a supplier's goods and/or services. Specifications must list three alternate suppliers, and must include the language "or approved equal." Specifications may not require a proprietary item, unless approved in advance in writing by DDC;
  - **Be generic in nature**
    -Emphasizing functional or performance criteria. As DDC awards contracts to the lowest responsible bidder, it is important that functional/performance specifications are tightly written to help ensure the quality of the job; and
  - **Use acceptable commercial standards**
- **Nomenclature**
  Incorrect nomenclature from the private sector or other government entities sometimes appears in documents submitted to DDC. Documents shall indicate that the owner is the City of New York. The following are some common errors and the proper replacements:
  - **City of New York**
    References to "owner" (or other agency or authority) should read "City of New York."
  - **Commissioner**
    References to "Architect," or "Engineer" should read "Commissioner."
  - **Format**
    Specifications must conform to CSI numbering format.
  - **Products**
    Specifications must not require the provision of a proprietary item, unless approved in advance in writing by DDC. For all products specified, the Consultant must list a minimum of three manufacturers, and must include the words "or approved equal."
  - **Incidental Asbestos**
    Specifications must include DDC's incidental asbestos specifications for each trade.
  - **Insurance and Indemnification**
    Specifications must not include any language regarding indemnification or insurance. These items are covered in the standard contract.
  - **Guarantees and Warranties**
    Specifications must include language specifying guarantees and warranties. Such guarantee and warranty requirements must also be listed in Schedule B, which is part of the Addendum to the General Conditions. The only exception to this general rule is as follows. If the guarantee period is for only one year, it is not necessary to state such requirement in the Specifications or in Schedule B. The reason for this is that the contract by its own terms requires a guarantee period of one year for all work.
  - **Instructions to Bidders**
    Specifications should not include instruction to bidders. These issues are covered by the "Information for Bidders", a standard component of the contract added by DDC.
  - **Controlled Inspections**
    The City of New York retains contracts for controlled inspections. Specifications should not include any references to any other entity performing these services.

E FORMS AND GRAPHICS

1. DDC Forms and Graphics

The Consultant is required to use DDC's standard title blocks, graphics, and blank forms referred to in the preceding sections. The forms are listed below, and must be individually downloaded from the internet at www.nyc.gov/buildnyc. For additional information about the use and requirements of these standard forms, the Consultant should contact the DDC Project Manager.

- **Title Sheet for Design Drawings**
- **Title Block for Design Drawings**
- **Architectural/Engineering Field Inspection Report: General Construction**
- **Architectural/Engineering Field Inspection Report: Electrical Work**
- **Architectural/Engineering Field Inspection Report: Mechanical Work**
- **Architectural/Engineering Field Inspection Report: Plumbing Work**
- **Outline of Construction Meeting Notes**
- **DDC Cost Estimate Form**
- **DDC Contractor's Bid Breakdown Form**
- **DDC Bid Form**
- **DDC Standard Construction Sign**
- **DDC Standard Dedication Plaque**
- **DDC Standard Shop Drawing Stamp**
- **Approvals Report Form PA-1**
- **Percent for Art Eligible Project Application Form**

2. Department of Buildings Required Filings

The Consultant will be responsible for a number of filings with the Buildings Department of New York City. The Consultant is strongly advised to review these forms as early as possible in order to be informed as to the scope of responsibilities to the Buildings Department. It is the Consultant's responsibility to establish what filings are required for each project and to confirm which version of each form is required by the relevant Buildings Department office before filing. As an advisory, below is the Department of Buildings Basic Filing package, as of August 2002. It is the Consultants responsibility to verify the number and version of filings for each project.

- **Basic Filing Package:**

  The Consultant must submit required forms to DOB, along with a complete set of plans, to start the application filing process. The forms required in the Basic Filing Package by the Department of Buildings at the time of this printing are listed below. Depending on the type of work and scope of the application, additional forms may be required. All Department of Buildings forms can be found on the DOB website http://www.nyc.gov/html/dob/html/pdfinst.html.

PW-1	Basic filing form required for all applications
PW-1A Schedule A, Occupancy/Use	Describes any change of floor layout and usage
PW-1B Schedule B, Plumbing/Sprinkler/Standpipe	Describes plumbing work to be done associated with the application

TR-1 Technical Report, Statement of Responsibility	Used for Directive 14 filing application when the professional assumes responsibility for inspections (limited Self-Certification)
PW-2 Work Permit (Renewal) Application	This is the basic Work Permit application form. It is usually filled out by a contractor for permission to start work on an "approved" application. This form must have the contractor's Tracking Number or License Number for verification of proper insurance.
PW-3 Cost Affidavit	Used by the Professional to estimate the cost of the work related to the application. DOB's fee is based on this document.
AL1 Additional Information	This form is included with the application when notes or important information related to the job need to be included, but not enough space is available.

3. Forms for Approvals from Overseeing Commissions

The Consultant is required to use forms provided by the Art Commission and the Landmarks Preservation Commission referred to in the preceding sections. The forms are listed below, and must be individually downloaded from the internet at the url given.

Art Commission Application Form:

http://www.nyc.gov/html/artcom/html/clients.html#applicants

Landmarks Preservation Commission Application Form

http://www.nyc.gov/html/lpc/pdfs/publications/application_form.pdf

F HIGH PERFORMANCE APPENDIX

1. Materials with Recycled Content

The following specification criteria have been assembled to promote the procurement of post-consumer/post-industrial recycled content in select building materials. Additional considerations related to product emissions, product toxicity, or other High Performance building criteria are included where appropriate. When a DDC project requires the use of one of the materials listed below, the specification must incorporate language from the specifications posted on the internet at www.nyc.gov/buildnyc Consultants having difficulty in identifying products that meet this specification should contact greeninfo@ddc.nyc.gov.

- **Athletic & Recreational Surfaces**
- **Coal Fly Ash in Concrete**
- **Plastic & Plastic/wood Composite Lumber**
- **Fiberglass Building Insulation**
- **Spray-on Fireproofing**
- **Gypsum Wallboard**
- **Ceramic Tile**
- **Acoustical Panel Ceilings**
- **Carpet Tile**
- **Plastic Toilet Compartments and Related Products**

2. Construction and Demolition Waste

Construction and Demolition Waste Management (C&D) specifications are required on all DDC projects. The actual specifications and a sample Waste Management Plan must be downloaded from the internet at www.nyc.gov/buildnyc. Further information, including a directory of waste processors, is available upon request at greeninfo@ddc.nyc.gov.

3. Low Toxicity Materials

Specification criteria have been assembled for non-toxic, low off-gassing and high-performance characteristics in select materials. When a DDC project requires the use of one of the materials listed below, the specification must incorporate the required language, which must be downloaded from the internet at www.nyc.gov/buildnyc. Specifications for recommended materials are also provided. Consultants having difficulty in identifying products that meet this specification should contact greeninfo@ddc.nyc.gov.

- **Required:**
  - **Adhesives**
  - **Concrete Curing Compound**
  - **Rot-Resistant Lumber**
  - **Carpet Systems**
  - **Paints**
  - **Polyurethanes and Varnishes**

- **Recommended:**
  - **Sealants**
  - **Linoleum**
  - **Wood Stains**
  - **Systems Furniture**