SCOPE OF WORK

NEW JERSEY DEPARTMENT OF TRANSPORTATION BUILDING MANAGEMENT SYSTEMS FOR REGIONAL OFFICES

Mt. Arlington, Freehold and Cherry Hill Regional Offices

PROJECT NO. T0485-00

STATE OF NEW JERSEY

Honorable Chris Christie, Governor Honorable Kim Guadagno, Lt. Governor

DEPARTMENT OF THE TREASURY

Andrew P. Sidamon-Eristoff, Treasurer



DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Steven Sutkin, Director

Date: January 20, 2012

TABLE OF C	CONTENTS
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SECTION

I.	OBJECTIVE6	
II.	CONSULTANT QUALIFICATIONS	
III.	PROJECT BUDGET	
IV.	PROJECT SCHEDULE8A.SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULEB.CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULEC.CONSULTANT DESIGN SCHEDULED.BID DOCUMENT CONSTRUCTION SCHEDULEE.CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE	
V.	 PROJECT SITE LOCATION & TEAM MEMBERS	
VI.	 PROJECT DEFINITION	

- A. CONTROL SYSTEM REQUIREMENTS
 - 1. Design Intent for Each Location
 - 2. Control System Required Features
 - 3. Additional Requirements
 - GENERAL DESIGN OVERVIEW
 - 1. Design Detail

Β.

- 2. Specification Format
- C. PROJECT COMMENCEMENT
 - 1. Project Directory
 - 2. Site Access
 - 3. Project Coordination
 - 4. Existing Documentation
 - 5. Scope of Work
 - 6. Project Schedule
- D. BUILDING & SITE INFORMATION
 - 1. Building Classification
 - 2. Building Block & Lot Number
 - 3. Building Site Plan
 - 4. Site Location Map
- E. DESIGN MEETINGS & PRESENTATIONS
 - 1. Design Meetings
 - 2. Design Presentations

VIII. CONSULTANT CONSTRUCTION RESPONSIBILITIES......19

- A. GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW
- B. PRE-BID MEETING
- C. BID OPENING
- D. POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD
 - 1. Post Bid Review
 - 2. Review meeting
 - 3. Substitutions
 - 4. Schedule
 - 5. Performance
 - 6. Superintendent
 - 7. Letter of Recommendation
 - 8. Conformed Drawings
- E. DIRECTOR'S HEARING
- F. CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS
 - 1. Meetings
 - 2. Schedules

- 3. Submittal Log
- G. CONSTRUCTION SITE ADMINISTRATION SERVICES
- H. SUB-CONSULTANT PARTICIPATION
- I. DRAWINGS
 - 1. Shop Drawings
 - 2. As-Built & Record Set Drawings
- J. CONSTRUCTION DEFICIENCY LIST
- K. INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION
- L. CLOSE-OUT DOCUMENTS
- M. CLOSE-OUT ACTIVITY TIME
- N. TESTING, TRAINING, MANUALS, AND ATTIC STOCK
 - 1. Testing
 - 2. Training
 - 3. Manuals
 - 4. Attic Stock
- O. CHANGE ORDERS
 - 1. Consultant
 - 2. Contractor
 - 3. Recommendation for Award
 - 4. Code Review
 - 5. Cost Estimate
 - 6. Time Extension
 - 7. Submission
 - 8. Meetings
 - 9. Consultant Fee

- A. REGULATORY AGENCY PERMITS
 - 1. NJ Uniform Construction Code Permit
 - 2. Other Regulatory Agency Approvals & Permits
 - 3. Prior Approval Certification Letters
- B. BARRIER FREE REQUIREMENTS
- C. STATE INSURANCE APPROVAL
- D. PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM
- E. MULTI-BUILDING OR MULTI-SITE PERMITS
- F. PERMIT MEETINGS
- G. MANDATORY NOTIFICATIONS
- H. CONSTRUCTION TRAILER PERMITS
- I. SPECIAL INSPECTIONS

X.	GE	GENERAL REQUIREMENTS		
	A.	SCOPE CHANGES		
	В.			
	C.			
	D.	AIR POLLUTION FROM ARCHITECTURAL COATINGS		
XI.	AL	LOWANCES		
	A.	PERMIT ALLOWANCE		
		1. Permits		
		2. Permit Costs		
		3. Applications		
		4. Consultant Fee		
XII. SUBMITTAL REG		BMITTAL REQUIREMENTS		
	A.	CONTRACT DELIVERABLES		
	В.	CATALOG CUTS		
	C.			
	D.			
	E.	SINGLE-PRIME CONTRACT		
XIII	. SO	W SIGNATURE APPROVAL SHEET		
XIV.	CO	NTRACT DELIVERABLES		
XV.	EX	HIBITS		
	A.	SAMPLE PROJECT SCHEDULE FORMAT		
	B.	CHERRY HILL DRAWINGS		
	C.	FREEHOLD DRAWINGS		
	D.	MT. ARLINGTON DRAWINGS		
	E.	AERIAL PHOTOS		

I. OBJECTIVE

The objective of this project is to install a new web based energy management system at each of the NJDOT regional offices in Mt. Arlington, Freehold and Cherry Hill. These systems will replace the existing control systems and shall be designed to control the HVAC systems and maintain the temperature and humidity throughout each location, providing energy management, a quality environment, and sustainability of the natural resources and the system.

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the P055 Energy Management Control Systems Discipline and have in-house capabilities or Sub-Consultants pre-qualified with DPMC in all other Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CONSTRUCTION COST ESTIMATE (CCE)

The initial Construction Cost Estimate (CCE) for this project is: \$642,093.

The Consultant shall review this Scope of Work and provide a narrative evaluation and analysis of the accuracy of the proposed project CCE in their technical proposal based on their professional experience and opinion.

B. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is: \$905,898.

The CWE includes the construction cost estimate and all consulting, permitting and administrative fees.

The CWE is the Client Agency's financial budget based on this project Scope of Work and shall not be exceeded during the design and construction phases of the project unless DPMC approves the change in Scope of Work through a Contract amendment.

C. COST ESTIMATING

On projects with a CCE under \$750,000, the estimate may be prepared by the Consultant's in-house staff or their Sub-Consultant's staff during each design phase of the project. However, if the CCE is \$750,000 or larger, the Consultant or Sub-Consultant providing the estimate must be pre-qualified with DPMC in the P025 Estimating/Cost Analysis Specialty Discipline.

All cost estimates shall be adjusted for regional location, site factors, construction phasing, premium time, building use group, location of work within the building, temporary swing space, security issues, and inflation factors based on the year in which the work is to be performed.

All cost estimates must be submitted on a DPMC-38 Project Cost Analysis form at each design phase of the project with a detailed construction cost analysis in CSI format (2004 Edition) for all appropriate divisions and sub-divisions. The Project Manager will provide cost figures for those items which may be in addition to the CCE such as art inclusion, CM services, etc. and must be included as part of the CWE. This cost analysis must be submitted for all projects regardless of the Construction Cost Estimate amount.

D. CONSULTANT'S FEES

The construction cost estimate for this project *shall not* be used as a basis for the Consultant's design and construction administration fees. The Consultant's fees shall be based on the information contained in this Scope of Work document and the observations made and/or the additional information received during the pre-proposal meeting.

IV. PROJECT SCHEDULE

A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE

The following schedule identifies the estimated design and construction phases for this project and the estimated durations.

PROJECT PHASE ESTIMATED DURATION (Calendar Days)

1.	Schematic Design Phase	25% (Minimum)	60
	• Project Team & DPMC Plan/C	Code Unit Review & Comment	14
2.	Design Development Phase	50% (Minimum)	30
	• Project Team & DPMC Plan/C	Code Unit Review & Comment	14
3.	Final Design Phase	100%	30
	• Project Team & DPMC Plan/C	Code Unit Review & Approval	14
4.	Permit Application Phase		21
	• Issue Permit		
5.	. Bid Phase		35
6.	. Award Phase		21
7.	Construction Phase		90

B. CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

The Consultant shall submit a project design and construction bar chart schedule with their technical proposal that is similar in format and detail to the schedule depicted in **Exhibit 'A'**. The bar chart schedule developed by the Consultant shall reflect their recommended project phases, phase activities, activity durations.

The Consultant shall estimate the duration of the project Close-Out Phase based on the anticipated time required to complete each deliverable identified in Section XIV of this document entitled "Contract Deliverables - Project Close-Out Phase" and include this information in the bar chart schedule submitted.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Consultant.

This schedule and narrative will be reviewed by the Consultant Selection Committee as part of the evaluation process and will be assigned a score commensurate with clarity and comprehensiveness of the submission.

C. CONSULTANT DESIGN SCHEDULE

The Project Manager will issue the Consultant's approved project schedule at the first design kickoff meeting. This schedule will be binding for the Consultant's activities and will include the start and completion dates for each design activity. The Consultant and Project Team members shall use this schedule to ensure that all design milestone dates are being met for the project. The Consultant shall update the schedule to reflect performance periodically (minimally at each design phase) for the Project Team review and approval. Any recommendations for deviations from the approved design schedule must be explained in detail as to the causes for the deviation(s) and impact to the schedule.

D. BID DOCUMENT CONSTRUCTION SCHEDULE

The Consultant shall include a construction schedule in Division 1 of the specification bid document. This schedule shall contain, at minimum, the major activities and their durations for each trade specified for the project. This schedule shall be in "bar chart" format and will be used by the Contractors as an aid in determining their bid price. It shall reflect special sequencing or phased construction requirements including, but not limited to: special hours for building access, weather restrictions, imposed constraints caused by Client Agency program schedules, security needs, lead times for materials and equipment, anticipated delivery dates for critical items, utility interruption and shut-down constraints, and concurrent construction activities of other projects at the site and any other item identified by the Consultant during the design phases of the project.

E. CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE

The Contractor shall be responsible for preparing a coordinated combined progress schedule with the Sub-Contractors after the award of the contract. This schedule shall meet all of the requirements identified in the Consultant's construction schedule. The construction schedule shall be completed in accordance with the latest edition of the Instructions to Bidders and General Conditions entitled, "Article 9, Construction Progress Schedule" (No CPM).

The Consultant must review and analyze this progress schedule and recommend approval/disapproval to the Project Team until a satisfactory version is approved by the Project Team. The Project Team must approve the baseline schedule prior to the start of construction and prior to the Contractor submitting invoices for payment.

The Consultant shall note in Division 1 of the specification that the State will not accept the progress schedule until it meets the project contract requirements and any delays to the start of the construction work will be against the Contractor until the date of acceptance by the State.

The construction progress schedule shall be reviewed, approved, and updated by the Contractor of schedule, Consultant, and Project Team members at each regularly scheduled construction job meeting and the Consultant shall note the date and trade(s) responsible for project delays (as applicable).

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESSES

The location of the project sites are:

New Jersey Department of Transportation Regional Operations North 200 Stierli Ct. (off Howard Blvd. @ Rt.80 MP 30.8) Mt. Arlington, NJ 07856

New Jersey Department of Transportation Regional Operations Central 100 Daniels Way (off of Rt.79 @ MP 0.35) Freehold, NJ 07728

New Jersey Department of Transportation Regional Operations South Rt.70 West, One Executive Campus Cherry Hill, NJ 08002

See Exhibit 'E' for the project site aerial photos.

B. PROJECT TEAM MEMBER DIRECTORY

The following are the names, addresses, and phone numbers of the Project Team members.

1. DPMC Representative:

Name:	Nurul Hasan, Project Manager
Address:	Division Property Management & Construction
	20 West State Street, 3 rd Floor
	Trenton, NJ 08625
Phone No:	(609) 633-8265
E-Mail No:	Nurul.Hasan@treas.state.nj.us

2. Client Agency Representative:

Name:	Dennis W. Meszaros
Address:	Department of Transportation
	Facilities Planning, Engineering and Construction
	1035 Parkway Avenue, 1 st Floor
	Trenton, New Jersey 08625
Phone No:	(609) 530-3770
E-Mail No:	Dennis.meszaros@dot.state.nj.us

VI. PROJECT DEFINITION

A. BACKGROUND

The NJDOT currently has three regional offices, one per region. Each office has traditional systems, namely; telephone, lighting, HVAC, security, fire and burglary. The intent of this project is to prepare construction documents and specifications to replace the existing control systems (Building Management System) and install a web-based control system operating the HVAC's temperature, humidity, and HVAC equipment and lighting throughout each facility.

B. FUNCTIONAL DESCRIPTION OF THE BUILDINGS

1. Building Description:

The building and HVAC system descriptions are as follows:

<u>Mt. Arlington, Region North Headquarters</u>: The Region North Headquarters is a two story building. Control of the HVAC system is not computerized or serviced by any one vendor but governed by wall mounted thermostats. The HVAC systems at this location are comprised of the following (Note: The equipment counts provided are for reference only. It is the bidding engineer's responsibility to identify all of the HVAC equipment to be controlled by the new building management system and field verify the quantities):

- 2-Heat Pump Loop Water Circulator Pumps
- 2-Hot Water Boilers
- 1-Cooling Tower
- 11-Water Source Heat Pump Units
- 1-Supply Fan Air Handler Unit
- 1-Exhaust Fan
- 4-Cabinet Unit Heaters
- 2-Unit Heaters

<u>Freehold, Region Central Headquarters</u>: The Region Central Headquarters is a two story building located off of Rt. 79 freehold. It is one of several buildings on a large acreage lot. Currently the system is controlled by computerization having VAV's with approximately 20 sensors on each floor. The computer system is TBS Controls. Again, the far reaching problem is that it is a proprietary system. The HVAC systems at this location are comprised of the following:

- 2-Hot Water Boilers with Boiler Circulator Pumps
- 2-Primary Hot Water Circulator Pumps
- 2-Zone Hot Water Circulator Pumps and Mixing Control Valve
- 3-Rooftop Units
- 74-Variable Air Volume Boxes with Reheat Coil Valves
- 74-Fin Tube Radiation with Control Valves
- 8-Exhaust Fans
- 1-Air Handler Unit for Snow Room
- 1-Liebert Unit

<u>Cherry Hill, Region South Headquarters</u>: The Region South Headquarters is a three story building within the Executive Campus office complex. The first floor contains DMV operations while the 2^{nd} and 3_{rd} floors are occupied by the NJDOT. The HVAC system is currently controlled by an on-site computer. Each floor has approximately 15 sensors throughout. The existing computer system is a Phillips McDade. The short coming of this system is that it is a proprietary system allowing the services of only one vendor in a procurement environment which must have competitive bidding. The HVAC systems at this location are comprised of the following:

- 3-Hot Water Boilers with Boiler Circulator Pumps
- 3-Primary Hot Water Circulator Pumps
- 2-Air Handler Units

- 35-Variable Air Volume Boxes with Reheat Coil Valves
- 38-Fan Powered Variable Air Volume Boxes with Reheat Coil Valves
- 123-Fin Tube Radiation with Control Valves
- 4-Exhaust Fans
- 1-Air Handler Unit for Traffic Room
- 2-Liebert Units
- 3-Cabinet Unit Heaters

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. CONTROL SYSTEM REQUIREMENTS

1. Design Intent for Each Location:

See **Exhibits B** through **D** for existing building floor plans/HVAC plans.

Mt. Arlington:

Provide standalone, local control (programmable thermostats) for the water source heat pumps. Provide a traditional DDC BMS system that will control but is not limited to the supply fan, boiler and condensing water circulating pumps, the exhaust fans, cooling tower and will monitor and alarm the other building systems. Provide a standalone controller for the boilers that provides outdoor temperature reset that is monitored and alarmed by the BMS system.

Freehold:

Provide a traditional DDC BMS (Direct Digital Control Building Management System) system that will control but is not limited to the rooftop units, radiant heaters, boiler and hot water circulating pumps, the exhaust fans, VAV boxes, the HVAC unit for the snow room and monitor the Liebert unit. Provide a standalone controller for the boilers that provides outdoor temperature reset that is monitored and alarmed by the BMS system.

Cherry Hill:

Provide a traditional DDC BMS system that will control but is not limited to the air-handler units, radiant heaters, boiler and hot water circulating pumps, the exhaust fans, VAV boxes, fan powered VAV boxes, the HVAC unit for the traffic room, the cabinet heaters and monitor the Liebert units. Provide a standalone controller for the boilers that provides outdoor temperature reset that is monitored and alarmed by the BMS system.

2. Control System Required Features:

The specified control systems shall have, at a minimum, the following features:

- Open protocol
- Web accessible
- Central server at each location
- Custom Graphic User Interface for each HVAC system showing status, setpoints and alarm conditions
- The ability to be expanded in the future and incorporate additional systems such as lighting controls, security, fire alarm and power monitoring I/O capability from operator station
- System security for each operator via software password and access levels.
- Automatic system diagnostics; monitor system and report failures
- Database creation and support
- Automatic and manual database save and restore
- Dynamic color graphic displays
- Custom graphics generation and graphics library of HVAC equipment and symbols
- Alarm processing, messages, and reactions
- Trend logs retrievable in spreadsheets and database programs
- Alarm and event processing
- Object and property status and control
- Automatic restart of field equipment on restoration of power
- Data collection, reports, and logs. Include standard reports for the following:
 - Current values of all objects
 - Current alarm summary
 - o Disabled objects
 - Alarm lockout objects
 - o Logs
- Custom report development
- Utility and weather reports
- Workstation application editors for controllers and schedules
- Maintenance management
- Email of status and alarm outputs.
- Dial a pre-recorded message to maintenance personnel
- Allow for future central monitoring capabilities

3. Additional Requirements:

The construction documents shall specifically address the following items:

A. The final design documentation shall include the requirement for videotaping of all training for the new control system(s) and that the training video be maintained on site and off site and that all personnel responsible for maintaining these systems be required to review the training

material prior to servicing the system. The videotape shall be burned to a DVD and provided in a video format that can be stored on the NJ DOT's server. There shall be a plaque located on the central control system console stating that the training video exists and that it is the responsibility of the service technician to review the video prior to working on the control system.

The training shall consist of how to operate the graphical user interface, configure the system parameters, including the alarm set points and alarm sending capabilities and how to replace, repair and maintain every control system component for the entire system.

- B. The final design documentation shall include the requirement that as-builts of the systems, system setpoints and sequence of operations be laminated and permanently affixed in the mechanical room or other appropriate location.
- C. The final design documentation shall list a minimum of three alternate manufacturers and that each of the manufacturers must have at least three service contractors located in New Jersey.
- D. The final design documentation should indicate reusing existing control components wherever possible, provided the existing components are of a suitable type for the use specified and have not reached their end of useable service life.
- E. The final design documents shall address the electrical requirements for the new energy management system.
- F. The final design documents shall address the demolition and removal of the existing systems.
- G. The final design documents shall address the need that the building will remain occupied and operational during the construction process. Issues such as human comfort, dust control and noise control shall be properly addressed.
- H. The final design documents shall address any telecommunication and/or data cabling and equipment required to integrate the control system into the NJDOT's telecommunication and/or data network. This must be coordinated with the NJDOT Information Technology officer.
- I. The final design documents should include the required warranty information required by the NJDOT. Coordinate warranty requirements with the NJDOT Project Manager.

B. GENERAL DESIGN OVERVIEW

1. Design Detail:

Section VII of this Scope of Work is intended as a guide for the Consultant to understand the overall basic design requirements of the project and is not intended to identify each specific design component related to code and construction items. The Consultant shall provide those details during the design phase of the project ensuring that they are in compliance with all applicable codes, regulating authorities, and the guidelines established in the DPMC Procedures for Architects and Engineers Manual.

The Consultant shall understand that construction documents submitted to DPMC shall go beyond the basic requirements set forth by the current copy of the Uniform Construction Code NJAC 5:23-2.15(f). Drawings and specifications shall provide detail beyond that required to merely show the nature and character of the work to be performed. The construction documents shall provide sufficient information and detail to illustrate, describe and clearly delineate the design intent of the Consultant and enable all Contractors to uniformly bid the project.

The Consultant shall ensure that all of the design items described in this scope of work are addressed and included in the project drawings and specification sections where appropriate.

It shall be the Consultant's responsibility to provide all of the design elements for this project. Under no circumstance may they delegate the responsibility of the design; or portions thereof, to the Contractor unless specifically allowed in this Scope of Work.

2. Specification Format:

The Consultant shall ensure that the project design specifications are formatted in the revised and expanded version of the Construction Specifications Institute (CSI) format entitled "Master Format 2004 Edition: Numbers and Titles."

The Consultant shall review all of the CSI Master Format 2004 specification sections listed and remove those that do not apply and edit those that remain so they are consistent and specific to this project scope of work.

C. PROJECT COMMENCEMENT

A pre-design meeting shall be scheduled with the Consultant and the Project Team members at the commencement of the project to obtain and/or coordinate the following information:

1. Project Directory:

Develop a project directory that identifies the name and phone number of key designated representatives who may be contacted during the design and construction phases of this project.

2. Site Access:

Develop procedures to access the project site and provide the names and phone numbers of approved escorts when needed. Obtain copies of special security and policy procedures that must be followed during all work conducted at the facility and include this information in Division 1 of the specification.

3. Project Coordination:

Review and become familiar with any current and/or future projects at the site that may impact the design, construction, and scheduling requirements of this project. Incorporate all appropriate information and coordination requirements in Division 1 of the specification.

4. Existing Documentation:

Copies of the following documents will be provided to each Consulting firm at the pre-proposal meeting to assist in the bidding process. Generally, the plans consist of the following.

- Site Plans
- Electrical Plan
- HVAC Plans
- Plumbing Plans

Review these documents and any additional information that may be provided at a later date such as reports, studies, surveys, equipment manuals, as-built drawings, etc. The State does not attest to the accuracy of the information provided and accepts no responsibility for the consequences of errors by the use of any information and material contained in the documentation provided. It shall be the responsibility of the Consultant to verify the contents and assume full responsibility for any determination or conclusion drawn from the material used. If the information provided is insufficient, the Consultant shall take the appropriate actions necessary to obtain the additional information required.

All original documentation shall be returned to the provider at the completion of the project.

5. Scope of Work:

Review the design and construction administration responsibilities and the submission requirements identified in this Scope of Work with the Project Team members. Items such as: contract deliverables, special sequencing or phased construction requirements, special hours for construction based on Client Agency programs or building occupancy, security needs, delivery dates of critical and long lead items, utility interruptions or shut down constraints for tie-ins, weather restrictions, and coordination with other project construction activities at the site shall be addressed.

This information and all general administrative information; including a narrative summary of the work for this project, *shall be included in Division 1* of the specification. The Consultant shall assure that there are no conflicts between the information contained in Division 1 of the specification and the DPMC General Conditions.

6. Project Schedule:

Review and update the project design and construction schedule with the Project Team members.

D. BUILDING & SITE INFORMATION

The following information shall be included in the project design documents.

1. Building Classification:

Provide the building Use Group Classification and Construction Type on the appropriate design drawing.

2. Building Block & Lot Number:

Provide the site Block and Lot Number on the appropriate design drawing.

3. Building Site Plan:

Only when the project scope involves site work, or when the design triggers code issues that require site information to show code compliance, shall a site plan be provided that is drawn in accordance with an accurate boundary line survey. The site plan shall include, but not be limited to, the following as may be applicable:

- The size and location of new and existing buildings and additions as well as other structures.
- The distance between buildings and structures and to lot lines.
- Established and new site grades and contours as well as building finished floor elevations.
- New and existing site utilities, site vehicular and pedestrian roads, walkways and parking areas.

4. Site Location Map:

Provide a site location map on the drawing cover sheet that identifies the vehicular travel routes from major roadways to the project construction site and the approved access roads to the Contractor's worksite staging area.

E. DESIGN MEETINGS & PRESENTATIONS

1. Design Meetings:

Conduct the appropriate number of review meetings with the Project Team members during each design phase of the project so they may determine if the project meets their requirements, question any aspect of the contract deliverables, and make changes where appropriate. The Consultant shall describe the philosophy and process used in the development of the design criteria and the various alternatives considered to meet the project objectives. Selected studies, sketches, cost estimates, schedules, and other relevant information shall be presented to support the design solutions proposed. Special considerations shall also be addressed such as: Contractor site access limitations, utility shutdowns and switchover coordination, phased construction and schedule requirements, security restrictions, available swing space, material and equipment delivery dates, etc.

It shall also be the responsibility of the Consultant to arrange and require all critical Sub-Consultants to be in attendance at the design review meetings.

Record the minutes of each design meeting and distribute within seven (7) calendar days to all attendees and those persons specified to be on the distribution list by the Project Manager.

2. Design Presentations:

The minimum number of design presentations required for each phase of this project is identified below for reference:

Schematic Phase: One (1) oral presentation at phase completion.

Design Development Phase: One (1) oral presentation at phase completion.

Final Design Phase: One (1) oral presentation at phase completion.

VIII.CONSULTANT CONSTRUCTION RESPONSIBILITIES

A. GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW

This section of the Scope of Work is intended as a guide for the Consultant to understand their overall basic construction administration responsibilities for the project and does not attempt to identify each specific activity or deliverable required during this phase. The Consultant shall obtain that information from the current publication of the DPMC Procedures for Architects and Engineers Manual and any additional information provided during the Consultant Selection Process.

B. PRE-BID MEETING

The Consultant shall attend, chair, record and distribute minutes of the Contractor pre-bid meetings. When bidders ask questions that may affect the bid price of the project, the Consultant shall develop a Bulletin(s) to clarify the bid documents in the format described in the Procedures for Architects and Engineers Manual, Section 9.2 entitled "Bulletins." These Bulletins must be sent to DPMC at least seven (7) calendar days prior to the bid opening date. DPMC will then distribute the document to all bidders.

C. BID OPENING

The Consultant must attend the bid opening held at the designated location.

In the event that the construction bids received exceed the Consultant's approved final cost estimate by 5% or more, the Consultant shall redesign and/or set up sufficient approved alternate designs, plans and specifications for the project work, to secure a bid that will come within the allocation specified by the State without impacting the programmatic requirements of the project. Such redesign work and changes to plans, including reproduction costs for submission in order to obtain final approval and permits, shall be undertaken by the Consultant at no additional cost to the State.

D. POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD

The Consultant; in conjunction with the Project Manager, shall review the bid proposals submitted by the various Contractors to determine the low responsible bid for the project. The Consultant; in conjunction with the Project Manager, shall develop a post bid questionnaire based on the requirements below and schedule a post bid review meeting with the Contractor's representative to review the construction costs and schedule, staffing, and other pertinent information to ensure they understand the Scope of the Work and that their bid proposal is complete and inclusive of all requirements necessary to deliver the project in strict accordance with the plans and specifications.

1. Post Bid Review:

Review the project bid proposals including the alternates, unit prices, and allowances within seven (7) calendar days from the bid due date. Provide a bid tabulation matrix comparing all bids submitted and make a statement about the high, low, and average bids received. Include a comparison of the submitted bids to the approved current construction cost estimate. When applicable, provide an analysis with supporting data, detailing why the bids did not meet the construction cost estimate.

2. Review Meeting:

Arrange a meeting with the apparent low bid Contractor to discuss their bid proposal and other issues regarding the award of the contract. Remind the Contractor that this is a Lump Sum bid. Request the

Contractor to confirm that their bid proposal does not contain errors. Review and confirm Alternate pricing and Unit pricing and document acceptance or rejection as appropriate.

Comment on all omissions, qualifications and unsolicited statements appearing in the proposals. Review any special circumstances of the project. Ensure the Contractor's signature appears on all post bid review documents.

3. Substitutions:

Inquire about any potential substitutions being contemplated by the Contractor and advise them of the State's guidelines for the approval of substitutions and the documentation required. Review the deadline and advise the Contractor that partial submissions are not acceptable. Submission after the deadline may be rejected by the State.

Equal substitutions that are proposed by the Contractor that are of lesser value must have a credit change order attached with the submittal (See Article 4 of the General Conditions). The State has the right to reject the submission if there is no agreement on the proposed credit. Contractor will be responsible to submit a specified item.

4. Schedule:

Confirm that the Contractor is aware of the number of calendar days listed in the contract documents for the project duration and that the Contractor's bid includes compliance with the schedule duration and completion dates. Particular attention shall be given to special working conditions, long lead items and projected delivery dates, etc. Review project milestones (if applicable). This could give an indication of Contractor performance, but not allow a rejection of the bid.

Review the submittal timeframes per the Contract documents. Ask the Contractor to identify what products will take over twenty-eight (28) calendar days to deliver from the point of submittal approval.

5. Performance:

Investigate the past performance of Contractor by contacting Architects and owners (generally three of each) that were listed in their DPMC pre-qualification package and other references that may have been provided. Inquire how the Contractor performed with workmanship, schedule, project management, change orders, cooperation, paper work, etc.

6. Superintendent:

Remind the Contractor that a full-time non-working superintendent is required per the General Conditions, who must be responsible to address Contract issues. (Article 4.3.2.).

7. Letter of Recommendation:

The Consultant shall prepare a Letter of Recommendation for contract award to the Contractor submitting the low responsible bid within three (3) calendar days from the post bid review meeting. The document shall contain the project title, DPMC project number, bid due date and expiration date of the proposal. It shall include a detailed narrative describing each post bid meeting agenda item identified above and a recommendation to award the contract to the apparent low bid Contractor based on the information obtained during that meeting. Describe any acceptance or rejection of Alternate pricing and Unit pricing.

Comment on any discussion with the Contractor that provides a sense of their understanding of the project and any special difficulties that they see, and how they might approach those problems.

Attach all minutes of the Post bid meeting and any other relevant correspondence with the Letter of Recommendation and submit them to the Project Manager.

8. Conformed Drawings:

The Consultant shall prepare and distribute two (2) sets of drawings stamped "Conformed Drawings" to the Project Manager that reflect all Bulletins and/or required changes, additions, and deletions to the pertinent drawings within twenty-eight (28) calendar days of the construction contract award date.

Any changes made in Bulletins, meeting minutes, post bid review requirements shall also be reflected in the specification.

E. DIRECTOR'S HEARING

The Consultant must attend any Director's hearing(s) if a Contractor submits a bid protest. The Consultant shall be present to interpret the intent of the design documents and answer any technical questions that may result from the meeting. In cases where the bid protest is upheld, the Consultant shall submit a new "Letter of Recommendation" for contract award. The hours required to attend the potential hearings and to document the findings shall be estimated by the Consultant and the costs will be included in the base bid of their fee proposal.

F. CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS

The Consultant shall conduct all of the construction job meetings in accordance with the procedures identified in the A/E manual and those listed below.

1. Meetings:

The Consultant and Sub-Consultant(s) shall attend the pre-construction meeting and all construction job meetings during the construction phase of the project. The Consultant shall chair the meeting, transcribe and distribute the job-meeting minutes for every job meeting to all attendees and to those

persons specified to be on the distribution list by the Project Manager. The Agenda for the meeting shall include, but not be limited to the items identified in the Procedures for Architects and Engineers Manual, Section 10.3.1, entitled "Agenda."

Also, the Consultant is responsible for the preparation and distribution of minutes within three (3) calendar days of the meeting. The format to be used for the minutes shall comply with those identified in the "Procedures for Architects and Engineers Manual," Section 10.3.4, entitled, "Format of Minutes." All meeting minutes are to have an "action" column indicating the party that is responsible for the action indicated and a deadline to accomplish the assigned task. These tasks must be reviewed at each job progress meeting until it is completed and the completion date of each task shall be noted in the minutes of the meeting following the task completion.

2. Schedules:

The Consultant; with the input from the Client Agency Representative and Project Manager, shall review and recommend approval of the project construction schedule prepared by the Contractor. The schedule shall identify all necessary start and completion dates of construction, construction activities, submittal process activities, material deliveries and other milestones required to give a complete review of the project.

The Consultant shall record any schedule delays, the party responsible for the delay, the schedule activity affected, and the original and new date for reference.

The Consultant shall ensure that the Contractor provides a two (2) week "look ahead" construction schedule based upon the current monthly updated schedule as approved at the bi-weekly job meetings and that identifies the daily planned activities for that period. This Contractor requirement must also be included in Division 1 of the specification for reference.

3. Submittal Log:

The Consultant shall develop and implement a submittal log that will identify all of the required project submittals as identified in the design specification. The dates of submission shall be determined and approved by all affected parties during the pre-construction meeting.

Examples of the submissions to be reviewed and approved by the Consultant and Sub-Consultant (if required) include: shop drawings, change orders, Request for Information (RFI), equipment and material catalog cuts, spec sheets, product data sheets, MSDS material safety data sheets, specification procedures, color charts, material samples, mock-ups, etc. The submittal review process must be conducted at each job progress meeting and shall include the Consultant, Sub-Consultant, Contractor, Project Manager, and designated representatives of the Client Agency.

The Consultant shall provide an updated submittal log at each job meeting that highlights all of the required submissions that are behind schedule during the construction phase of the project.

G. CONSTRUCTION SITE ADMINISTRATION SERVICES

The Consultant and Sub-Consultant(s) shall provide construction site administration services during the duration of the project. The Consultant and Sub-Consultant(s) do not necessarily have to be on site concurrently if there are no critical activities taking place that require the Sub-Consultant's participation.

The services required shall include, but not be limited to; field observations sufficient to verify the quality and progress of construction work, conformance and compliance with the contract documents, and to attend/chair meetings as may be required by the Project Manager to resolve special issues.

A field observation visit may be conducted in conjunction with regularly scheduled construction job meetings, depending on the progress of work. The Consultant and their Sub-Consultant(s) shall submit a field observation report for each site inspection to the Project Manager. Also, they shall conduct inspections during major construction activities including, but not limited to the following examples: concrete pours, steel and truss installations, code inspections, final testing of systems, achievement of each major milestone required on the construction schedule, and requests from the Project Manager. The assignment of a full time on-site Sub-Consultant does not relieve the Consultant of their site visit obligation.

The Consultant shall refer to Section XIV. Contract Deliverables of this Scope of Work subsection entitled "Construction Phase" to determine the extent of services and deliverables required during this phase of the project.

H. SUB-CONSULTANT PARTICIPATION

It is the responsibility of the Consultant to ensure that they have provided adequate hours and/or time allotted in their technical proposal so that their Sub-Consultants may participate in all appropriate phases and activities of this project or whenever requested by the Project Manager. This includes the pre-proposal site visit and the various design meetings and construction job meetings, site visits, and close-out activities described in this Scope of Work. Field observation reports and/or meeting minutes are required to be submitted to the Project Manager within three (3) calendar days of the site visit or meeting. All costs associated with such services shall be included in the base bid of the Consultant's fee proposal.

I. DRAWINGS

1. Shop Drawings:

Each Contractor shall review the specifications and determine the numbers and nature of each shop drawing submittal. Five (5) sets of the documents shall be submitted with reference made to the appropriate section of the specification. The Consultant shall review the Contractor's shop drawing

submissions for conformity with the construction documents within fourteen (14) calendar days of receipt. The Consultant shall return each shop drawing submittal stamped with the appropriate action, i.e. "Approved", "Approved as Noted", "Approved as Noted", "Consultant for Records", "Rejected", etc.

2. As-Built & Record Set Drawings:

The Contractor(s) shall keep the contract drawings up-to-date at all times during construction and upon completion of the project, submit their AS-BUILT drawings to the Consultant with the Contractor(s) certification as to the accuracy of the information prior to final payment. All AS-BUILT drawings submitted shall be entitled AS-BUILT above the title block and dated.

The Consultant shall review the Contractor(s)' AS-BUILT drawings at each job progress meeting to ensure that they are up-to-date. Any deficiencies shall be noted in the progress meeting minutes.

The Consultant shall acknowledge acceptance of the AS-BUILT drawings by signing a transmittal indicating they have reviewed them and that they reflect the AS-BUILT conditions as they exist.

Upon receipt of the AS-BUILT drawings from the Contractor(s), The Consultant shall obtain the original mylars from DPMC and transfer the AS-BUILT conditions to the original full sized signed mylars to reflect RECORD conditions within twenty-eight (28) calendar days of receipt of the AS-BUILT information.

The Consultant shall note the following statement on the original RECORD-SET drawings. "The AS-BUILT information added to this drawing(s) has been supplied by the Contractor(s). The (Architect) (Engineer) does not assume the responsibility for its accuracy other than conformity with the design concept and general adequacy of the AS-BUILT information to the best of the (Architect's) (Engineer's) knowledge."

Upon completion, The Consultant shall deliver the RECORD-SET original mylars to DPMC who will acknowledge their receipt in writing. This hard copy set of drawings and three (3) sets of current release AUTO CAD discs shall be submitted to DPMC and the discs shall contain all AS-BUILT drawings in both ".dwg" (native file format for AUTO CAD) and ".tif" (Tagged Image File) file formats.

J. CONSTRUCTION DEFICIENCY LIST

The Consultant shall prepare, maintain and continuously distribute an on-going deficiency list to the Contractor, Project Manager, and Client Agency Representative during the construction phase of the project. This list shall be separate correspondence from the field observation reports and shall not be considered as a punch list.

K. INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION

The Consultant and their Sub-Consultant(s) accompanied by the Project Manager, Code Inspection Group, Client Agency Representative and Contractor shall conduct site inspections to determine the dates of substantial and final completion. The Project Manager will issue the only recognized official notice of substantial completion. The Consultant shall prepare and distribute the coordinated punch list, written warranties and other related DPMC forms and documents, supplied by the Contractor, to the Project Manager for review and certification of final contract acceptance.

If applicable, the punch list shall include a list of attic stock and spare parts.

L. CLOSE-OUT DOCUMENTS

The Consultant shall review all project close-out documents as submitted by the Contractors to ensure that they comply with the requirements listed in the "Procedure for Architects and Engineers' Manual." The Consultant shall forward the package to the Project Manager within twenty-eight (28) calendar days from the date the Certificate of Occupancy/Certificate of Approval is issued. The Consultant shall also submit a letter certifying that the project was completed in accordance with the contract documents, etc.

M. CLOSE-OUT ACTIVITY TIME

The Consultant shall provide all activities and deliverables associated with the "Close-Out Phase" of this project as part of their Lump Sum base bid. The Consultant and/or Sub-Consultant(s) may not use this time for additional job meetings or extended administrative services during the Construction Phase of the project.

N. TESTING, TRAINING, MANUALS, AND ATTIC STOCK

The Consultant shall ensure that all equipment testing, training sessions and equipment manuals required for this project comply with the requirements identified below.

1. Testing:

All equipment and product testing conducted during the course of construction is the responsibility of the Contractor. However, the Consultant shall ensure the testing procedures comply with manufacturers recommendations. The Consultant shall review the final test reports and provide a written recommendation of the acceptance/rejection of the material, products or equipment tested within fourteen (14) calendar days of receipt of the report.

2. Training:

The Consultant shall include in the specification that the Contractor shall schedule and coordinate all equipment training with the Project Manager and Client Agency representatives. It shall state that the Contractor shall submit the Operation and Maintenance (O&M) manuals, training plan contents, and training durations to the Consultant, Project Manager and Client Agency Representative for review and approval prior to the training session.

All costs associated with the training sessions shall be borne by the Contractor installing the equipment. A signed letter shall be prepared stating when the training was completed and must be accompanied with the training session sign-in sheet as part of the project close-out package.

3. Operation & Maintenance Manuals:

The Consultant shall coordinate and review the preparation and issuance of the equipment manuals provided by the Contractor(s) ensuring that they contain the operating procedures, maintenance procedures and frequency, cut sheets, parts lists, warranties, guarantees, and detailed drawings for all equipment installed at the facility.

A troubleshooting guide shall be included that lists problems that may arise, possible causes with solutions, and criteria for deciding when equipment shall be repaired and when it must be replaced.

Include a list of the manufacturer's recommended spare parts for all equipment being supplied for this project.

The Consultant shall ensure that the training session is videotaped by the Contractor. A transmittal copy must be presented to the Project Manager who will forward the document to the Client Agency for future reference.

A list of names, addresses and telephone numbers of the Contractors involved in the installations and firms capable of performing services for each mechanical item shall be included. The content of the manuals shall be reviewed and approved by the Project Manager and Client Agency Representative.

The Consultant shall include in the specification that the Contractor must provide a minimum of ten (10) "throwaway" copies of the manual for use at the training seminar and seven (7) hardbound copies as part of the project close-out package.

4. Attic Stock:

The Consultant shall determine and recommend whether "attic stock" should be included for all aspects of the project. If required, the Consultant shall specify attic stock items to be included in the project.

Prior to project close-out, the Consultant must prepare a comprehensive listing of all items for delivery by the Contractor to the Owner and in accordance with the appropriate specification/plan section.

Items shall include, but not be limited to: training sessions, O&M manuals, as-built drawings, itemized attic stock requirements, and manufacturer guarantees/warranties.

O. CHANGE ORDERS

The Consultant shall review and process all change orders in accordance with the contract documents and procedures described below.

1. Consultant:

The Consultant shall prepare a detailed request for Change Order including a detailed description of the change(s) along with appropriate drawings, specifications, and related documentation and submit the information to the Contractor for the change order request submission. This will require the use of the current DPMC 9b form.

2. Contractor:

The Contractor shall submit a DPMC 9b Change Order Request form to the Project Manager within seven (7) calendar days after receiving the Change Order from the Consultant. The document shall identify the changed work in a manner that will allow a clear understanding of the necessity for the change. Copies of the original design drawings, sketches, etc. and specification pages shall be highlighted to clarify and show entitlement to the Change Order.

Copies shall be provided of job minutes or correspondence with all relative information highlighted to show the origin of the Change Order. Supplementary drawings from the Consultant shall be included if applicable that indicate the manner to be used to complete the changed work. A detailed breakdown of all costs associated with the change, i.e. material, labor, equipment, overhead, Sub-Contractor work, profit and bond, and certification of increased bond shall be provided.

If the Change Order will impact the time of the project, the Contractor shall include a request for an extension of time. This request shall include a copy of the original approved project schedule and a proposed revised schedule that reflects the impact on the project completion date. Documentation to account for the added time requested shall be included to support entitlement of the request such as additional work, weather, other Contractors, etc. This documentation shall contain dates, weather data and all other relative information.

3. Recommendation for Award:

The Consultant shall evaluate the reason for the change in work and provide a detailed written recommendation for approval or disapproval of the Change Order Request including backup documentation of costs in CSI format and all other considerations to substantiate that decision.

4. Code Review:

The Consultant shall determine if the Change Order request will require Code review and shall submit six (6) sets of signed and sealed modified drawings and specifications to the DPMC Plan & Code Review Unit for approval, if required. The Consultant must also determine and produce a permit amendment request if required.

5. Cost Estimate:

The Consultant shall provide a detailed cost estimate of the proposed Change Order Request, as submitted by the Contractor, in CSI format (2004 Edition) for all appropriate divisions and subdivisions using a recognized estimating formula. The estimate shall then be compared with that of the Contractor's estimate. If any line item in the Consultant's estimate is lower than the corresponding line item in the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the cost differences. The Consultant shall document the negotiated agreement on the Change Order Request form. If the Contractor's total dollar value changes based on the negotiations, the Consultant shall identify the changes on the Change Order Request form accordingly.

When recommending approval or disapproval of the change order, the Consultant shall be required to prepare and process a Change Order package that contains at a minimum the following documents:

- DPMC 9b Change Order Request
- DPMC 10 Consultant's Evaluation of Contractor's Change Order Request
- Consultant's Independent Detailed Cost Estimate
- Notes of Negotiations

6. Time Extension:

When a Change Order Request is submitted with both cost and time factors, the Consultant's independent cost estimate is to take into consideration time factors associated with the changed work. The Consultant is to compare their time element with that of the Contractor's time request and if there is a significant difference, the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the difference.

When a Change Order Request is submitted for time only, the Consultant is to do an independent evaluation of the time extension request using a recognized scheduling formula.

Requests for extension of contract time must be done in accordance with the General Conditions Section 14.2.2.

7. Submission:

The Consultant shall complete all of the DPMC Change Order Request forms provided and submit a completed package to the Project Manager with all appropriate backup documentation within seven (7) calendar days from receipt of the Contractor's change order request. The Consultant shall resubmit the package at no cost to the State if the change order package contents are deemed insufficient by the Project Manager.

8. Meetings:

The Consultant shall attend and actively participate at all administrative hearings or settlement conferences as may be called by Project Manager in connection with such Change Orders and provide minutes of those meetings to the Project Manager for distribution.

9. Consultant Fee:

All costs associated with the potential Contractor Change Order Requests shall be anticipated by the Consultant and included in the base bid of their fee proposal.

If the Client Agency Representative requests a scope change; and it is approved by the Project Manager, the Consultant may be entitled to be reimbursed through an amendment and in accordance with the requirements stated in paragraph 10.01 of this Scope of Work.

IX. PERMITS & APPROVALS

A. REGULATORY AGENCY PERMITS

The Consultant shall comply with the following guidelines to ensure that all required permits, certificates, and approvals required by State regulatory agencies are obtained for this project.

1. NJ Uniform Construction Code Permit:

The Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections with all technical site data listed. The Agent section of the application and certification section of the building sub-code section shall be signed. These documents shall be forwarded to the Project Manager who will send them to the Department of Community Affairs (DCA) and all permit application costs will be paid by DPMC from encumbered funds for the project.

The Consultant may obtain access and copies of all NJUCC Building, Fire, Plumbing, Electrical and Elevator permit applications at the following website: <u>www.nj.gov/dca/codes</u>

The project construction documents must comply with the latest adopted edition of the NJ Uniform Construction Code that is in effect at the Final Design Phase of this project.

All other required project permits shall be obtained and paid for by the Consultant in accordance with the procedures described in paragraph 2. below.

2. Other Regulatory Agency Permits, Certificates, and Approvals:

The Consultant shall identify and obtain all other State Regulatory Agency permits, certificates, and approvals that will govern and affect the work described in this Scope of Work. An itemized list of these permits, certificates, and approvals shall be included with the Consultant's Technical Proposal and the total amount of the application fees should be entered in the Fee Proposal line item entitled, **"Permit Fee Allowance."** See Section XIV. 6.4.8 for a preliminary list of Regulatory Agency approvals.

The Consultant may refer to the Division of Property Management and Construction "Procedures for Architects and Engineers Manual", Section 6.4.8, which presents a compendium of State permits, certificates, and approvals that may be required for this project.

The Consultant shall determine the appropriate phase of the project to submit the permit application(s) in order to meet the approved project milestone dates.

Where reference to an established industry standard is made, it shall be understood to mean the most recent edition of the standard unless otherwise noted. If an industry standard is found to be revoked, or should the standard have undergone substantial change or revision from the time that the Scope of Work was developed, the Consultant shall comply with the most recent edition of the standard.

3. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various prior approvals as defined by NJAC 5:23-1.4. It is the Consultant's responsibility to determine which prior approvals, if any, are required. The Consultant shall submit a general certification letter to the DPMC Plan & Code Review Unit Manager during the Permit Phase of this project that certifies all required prior approvals have been obtained.

In addition to the general certification letter discussed above, the following specific prior approval certification letters, where applicable, shall be submitted by the Consultant to the DPMC Plan & Code Review Unit Manager: Soil Erosion & Sediment Control, Water & Sewer Treatment Works Approval, Coastal Areas Facilities Review, Compliance of Underground Storage Tank Systems with NJAC 7:14 b, Pinelands Review, Compliance of Abandoned Wells with NJAC 7:9-9, Certification that all utilities have been disconnected from structures to be demolished, Board of Health Approval for Potable Water Wells, Health Department Approval for Septic Systems. It shall be noted that in accordance with NJAC 5:23-2.15(a)5, a permit cannot be issued until the letter(s) of certification is received.

B. BARRIER FREE REQUIREMENTS

The Consultant, in cooperation with the Client Agency Representative, shall assure that this project complies with the NJUCC Barrier Free Sub code where applicable.

C. STATE INSURANCE APPROVAL

The Consultant shall respond in writing to the FM Global Insurance Underwriter plan review comments through the DPMC Plan & Code Review Unit Manager as applicable. The Consultant shall review all the comments and modify the documents while adhering to the project's SOW requirements, State code requirements, schedule, budget, and Consultant fee.

D. PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM

A paragraph shall be included in the design documents, if applicable to this project that states: The Contractor shall comply with all the requirements stipulated in the Public Employees Occupational Safety & Health Program (PEOSHA) document, paragraph 12:100-13.5 entitled "Air quality during renovation and remodeling". The Contractor shall submit a plan demonstrating the measures to be utilized to confine the dust, debris, and air contaminants in the renovation or construction area of the project site to the Project Team prior to the start of construction.

The link to the document is: <u>http://www.state.nj.us/health/eoh/peoshweb/iaqstd.pdf</u>

E. MULTI-BUILDING OR MULTI-SITE PERMITS

A project that involves many buildings and/or sites requires that a separate permit shall be issued for each building or site. The Consultant must determine the construction cost estimate for *each* building and/or site location and submit that amount where indicated on the permit application.

F. PERMIT MEETINGS

The Consultant shall attend and chair all meetings with Permitting Agencies necessary to explain and obtain the required permits.

G. MANDATORY NOTIFICATIONS

The Consultant shall include language in Division 1 of the specification that states the Contractor shall assure compliance with the New Jersey "One Call" Program (1-800-272-1000) if any excavation is to occur at the project site.

The One Call Program is known as the New Jersey Underground Facility Protection Act, N.J.S.A. 48:2-73 through N.J.S.A. 48:2-91, and N.J.A.C. 14:2-1.1 through N.J.A.C. 14:2-6.4.

H. CONSTRUCTION TRAILER PERMITS

If construction trailers are required for the project then the Consultant shall include language in the Supplemental General Conditions that states the Contractor(s) shall be responsible to obtain and pay for each construction trailer permit directly from the Department of Community Affairs. (General Contractor for Single Bid-Lump Sum All Trades contract, and each Contractor for Separate Bids & Single Bid contract).

DCA will allow a single permit application to cover more than one trailer per Contractor provided the building, plumbing, and electrical technical sub-code sections, as applicable, specify the correct numbers and costs. The trailers will not require a plan review.

DCA will inspect each construction trailer and issue a Certificate of Occupancy (CO) separate from the main building construction.

Storage trailers with no utility connections are exempt from this requirement.

I. SPECIAL INSPECTIONS

In accordance with the requirements of the New Jersey Uniform Construction Code, Bulletin 03-5 and as clarified further by the Department of Community Affairs, the Consultant shall be responsible for the coordination of all special inspections during the construction phase of the project.

1. Definition:

Special inspections are defined as an independent verification by a qualified person (special Inspector) rendered to the code official for **Class I buildings only**. The special inspector is to be independent from the Contractor and responsible to the building owner or owner's agent so that there is no possible conflict of interest.

2. Responsibilities:

The Consultant shall submit with the permit application, a list of special inspections and the firm(s) that will be responsible to carry out the inspections required for the project. The list shall be a separate document, on letter head, signed and sealed.

3. Special Inspections:

The following special inspections, as applicable to this project, shall be performed in accordance with Chapter 17 of the International Building Code, New Jersey Edition, as defined below.

• Steel construction, in accordance with Section 1704.3.

- Concrete construction, in accordance with Section 1704.4.
- Masonry construction, in accordance with Section 1704.5.
- Soils, in accordance with Section 1704.7.
- Pile foundations, in accordance with Section 1704.8.
- Seismic resistance for Design Category D buildings, in accordance with Section 1707.
- Structural testing for isolation damping systems in seismic Design Category D buildings, in accordance with Section 1708.
- A quality assurance plan for seismic resistance of seismic Design Category D buildings, in accordance with Sections 1705.1 and 1705.2.

Special inspectors shall be licensed in accordance with the requirements in the New Jersey Uniform Construction Code.

X. GENERAL REQUIREMENTS

A. SCOPE CHANGES

The Consultant must request any changes to this Scope of Work in writing. An approved DPMC 9d Consultant Amendment Request form reflecting authorized scope changes must be received by the Consultant prior to undertaking any additional work. The DPMC 9d form must be approved and signed by the Director of DPMC and written authorization issued from the Project Manager prior to any work being performed by the Consultant. Any work performed without the executed DPMC 9d form is done at the Consultant's own financial risk.

B. ERRORS AND OMISSIONS

The errors and omissions curve and the corresponding sections of the "Procedures for Architects and Engineers Manual" are eliminated. All claims for errors and omissions will be pursued by the State on an individual basis. The State will review each error or omission with the Consultant and determine the actual amount of damages, if any, resulting from each negligent act, error or omission.

C. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs described on the "New Jersey's Clean Energy Program" website at: <u>http://www.njcleanenergy.com</u> to determine if any proposed upgrades to the mechanical and/or electrical equipment and systems for this project qualify for "New Jersey Clean Energy Program" rebates and incentives such as SmartStart, Pay4Performance, Direct Install or any other incentives.

The Consultant shall be responsible to complete the appropriate registration forms and applications, provide any applicable worksheets, manufacturer's specification sheets, calculations, attend meetings, and participate in all activities with designated representatives of the programs and utility companies to obtain the entitled financial incentives and rebates for this project. All costs associated with this work shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

D. AIR POLLUTION FROM ARCHITECTURAL COATINGS

The Consultant shall include in the appropriate sections of the specification the requirement that all architectural coatings applied at the project site shall comply with the NJDEP Administrative Code Title 7, Chapter 27, Subchapter 23, entitled "Prevention of Air Pollution from Architectural Coatings".

Architectural coatings shall mean materials applied for protective, decorative, or functional purposes to stationary structures or their appurtenances, portable buildings, pavements, or curbs. The coating materials include, but are not limited to, paints, varnishes, sealers, and stains.

XI. ALLOWANCES

A. **PERMIT FEE ALLOWANCE**

The Consultant shall obtain and pay for all of the project permits in accordance with the guidelines identified below.

1. Permits:

The Consultant shall determine the various State permits, certificates, and approvals required to complete this project.

2. Permit Costs:

The Consultant shall determine the application fee costs for all of the required project permits, certificates, and approvals (excluding the NJ Uniform Construction Code permit) and include that amount in their fee proposal line item entitled **"Permit Fee Allowance"**. A breakdown of each permit and application fee shall be attached to the fee proposal for reference.

NOTE: The NJ Uniform Construction Code permit is excluded since it is obtained and paid for by DPMC.

3. Applications:

The Consultant shall fill out and submit all permit applications to the appropriate permitting authorities and the costs shall be paid from the Consultant's permit fee allowance provided. A copy of the application(s) and the original permit(s) obtained by the Consultant shall be given to the Project Manager for distribution during construction.

4. Consultant Fee:

The Consultant shall determine what is required to complete and submit the permit applications, obtain supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the "Permit Phase" column.

Any funds remaining in the permit allowance account will be returned to the State at the close of the project.

XII. SUBMITTAL REQUIREMENTS

A. CONTRACT DELIVERABLES

All submissions shall include the Contract Deliverables identified in Section XIV of this Scope of Work and described in the DPMC Procedures for Architects and Engineers Manual.

B. CATALOG CUTS

The Consultant shall provide catalog cuts as required by the DPMC Plan & Code Review Unit during the design document review submissions. Examples of catalog cuts include, but are not limited to: mechanical equipment, hardware devices, plumbing fixtures, fire suppression and alarm components, specialized building materials, electrical devices, etc.

C. PROJECT DOCUMENT BOOKLET

The Consultant shall submit all of the required Contract Deliverables to the Project Manager at the completion of each phase of the project. All reports, meeting minutes, plan review comments, project schedule, cost estimate in CSI format (2004 Edition), correspondence, calculations, and other appropriate items identified on the Submission Checklist form provided in the A/E Manual shall be presented in an $8\frac{1}{2}$ " x 11" bound "booklet" format.

D. DESIGN DOCUMENT CHANGES

Any corrections, additions, or omissions made to the submitted drawings and specifications at the Permit Phase of the project must be submitted to DPMC Plan & Code Review Unit as a complete

document. Corrected pages or drawings may not be submitted separately unless the Consultant inserts the changed page or drawing in the original documents. No Addendums or Bulletins will be accepted as a substitution to the original specification page or drawing.

E. SINGLE-PRIME CONTRACT

All references to "separate contracts" in the Procedures for Architects and Engineers Manual, Chapter 8, shall be deleted since this project will be advertised as a "Single Bid" (Lump Sum All Trades) contract. The single prime Contractor will be responsible for all work identified in the drawings and specifications.

The drawings shall have the required prefix designations and the specification sections shall have the color codes as specified for each trade in the DPMC Procedure for Architects and Engineers Manual.

The Consultant must still develop the Construction Cost Estimate (CCE) for each trade and the amount shall be included on the DPMC-38 Project Cost Analysis form where indicated. This document shall be submitted at each design phase of the project and updated immediately prior to the advertisement to bid.

XIII. SOW SIGNATURE APPROVAL SHEET

This Scope of Work shall not be considered a valid document unless all signatures appear in each designated area below.

The Client Agency approval signature on this page indicates that they have reviewed the design criteria and construction schedule described in this project Scope of Work and verifies that the work will not conflict with the existing or future construction activities of other projects at the site.

SOW PREPARED BY: much h). JAMES WRIGHT, PROJECT MANAGER DPMC PROJECT PLANNING & INITIATION SOW APPROVED BY: S MCKENNA, MANAGER **PROJECT PLANNING & INITIATION SOW APPROVED BY:** DENNIS MESZAROS, PROJECT MANAGER NJ DEPARTMENT OF TRANSPORTATION SOW APPROVED BY: NURUL HASAN, PROJECT MANAGER DPMC PROJECT MANAGEMENT GROUP **SOW APPROVED BY:** RICHARD FLODMAND, DEPUTY DIREC **DIV PROPERTY MGT & CONSTRUCTION**

XIV.CONTRACT DELIVERABLES

The following is a listing of Contract Deliverables that are required at the completion of each phase of this project. The Consultant shall refer to the DPMC publication entitled, "Procedures for Architects and Engineers," Volumes I and II, 2nd Edition, dated January, 1991 to obtain a more detailed description of the deliverables required for each item listed below.

The numbering system used in this "Contract Deliverables" section of the scope of work corresponds to the numbering system used in the "Procedures for Architects and Engineers" manual and some may have been deleted if they do not apply to this project.

SCHEMATIC DESIGN PHASE: 25% Complete Design Documents (Minimum)

- 6.1 **Project Schedule (Update Bar Chart Schedule)**
- 6.2 Meetings & Minutes (Minutes within 5 working days of meeting)
- 6.3 Correspondence

6.4 Submission Requirements

- 6.4.1 A/E Statement of Site Visit, As-Built Drawing Verification (if available)
- 6.4.2 Space Analysis & Program Requirements
- 6.4.3 Special Features Description: lighting, HVAC, energy management systems, etc.
- 6.4.4 Site Evaluation
- 6.4.7 Design Rendering/Sketches
- 6.4.8 Regulatory Agency Approvals
- 6.4.10 Drawings: 6 sets Cover Sheet (See A/E Manual for format) Site Utility Plan Floor Plans Sections/Details HVAC BMS Narrative Electrical Narrative
- 6.4.11 Specifications: 6 sets (See A/E Manual for format, include Division 1 and edit to describe the administrative and general requirements of the project)
- 6.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
- 6.4.13 Bar Chart of Design and Construction Schedule
- 6.4.14 Oral Presentation of Submission to Project Team
- 6.4.15 SOW Compliance Statement
- 6.4.16 This Submission Checklist (See A/E Manual, Figure 6.4.16 for format)

6.4.17 Deliverables Submission in Booklet Form: 7 sets

6.5 Approval

6.5.1 Respond to Submission Comments

6.6 Submission Forms

Figure 6.4.10	Plan Review Record Sheet
Figure 6.4.12	Current Working Estimate/Cost Analysis
Figure 6.4.16	Submission Checklist

DESIGN DEVELOPMENT PHASE: 50% Complete Design Documents (Minimum)

- 7.1 Project Schedule (Update Bar Chart Schedule)
- 7.2 Meetings & Minutes (Minutes within 5 working days of meeting)
- 7.3 Correspondence

7.4 Submission Requirements

- 7.4.1 A/E Statement of Site Visit, As-Built Drawing Verification (if available)
- 7.4.2 Space Analysis & Program Requirements (if changed from Schematic Phase)
- 7.4.3 Special Features Description: lighting, HVAC, energy management systems, etc.
- 7.4.4 Site Evaluation
- 7.4.7 Design Rendering/Sketches
- 7.4.8 Regulatory Agency Approvals
- 7.4.10 Drawings: 6 sets Cover Sheet (See A/E Manual for format) Site Utility Plan Floor Plans Sections/Details Energy Management System Drawings, Control Points and Sequence of Operations Electrical Drawings, Panel Schedules, BMS Power Configuration Emergency Power Equipment & Source
- 7.4.11 Specifications: 6 sets (See A/E Manual for format, include Division 1 and edit to describe the administrative and general requirements of the project)
- 7.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
- 7.4.13 Bar Chart of Design and Construction Schedule
- 7.4.14 Oral Presentation of Submission to Project Team
- 7.4.15 SOW Compliance Statement

7.4.16 This Submission Checklist (See A/E Manual, Figure 6.4.16 for format)7.4.17 Deliverables Submission in Booklet Form: 7 sets

7.5 Approval

7.5.1 Respond to Submission Comments

7.6 Submission Forms

Figure 7.4.12Current Working Estimate/Cost AnalysisFigure 7.4.16Submission Checklist

FINAL DESIGN PHASE 100% Complete Construction Documents

This Final Design Phase may require more than one submission based on the technical quality and code conformance of the design documents.

- 8.1 Schedule (Update Bar Chart Schedule)
- 8.2 Meeting & Minutes (Minutes within 5 working days of meeting)
- 8.3 Correspondence

8.4 Submission Requirements

- 8.4.1 A/E Statement of Site Visit
- 8.4.2 Space Analysis & Program Requirements (if changed from Previous Phase)
- 8.4.3 Special Features Description: lighting, HVAC, energy management systems, etc.
- 8.4.4 Site Evaluation
- 8.4.7 Photographs
- 8.4.8 Regulatory Agency Approvals (Include itemized list specific to this project)
- 8.4.10 Drawings: 6 sets
- 8.4.11 Specifications: 6 sets
- 8.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form
- 8.4.13 Bar Chart of Design and Construction Schedule
- 8.4.14 Oral Presentation of this Submission to Project Team
- 8.4.15 Plan Review/SOW Compliance Statement
- 8.4.16 This Submission Checklist
- 8.4.17 Deliverables Submission in Booklet Form: 7 sets

8.5 Approvals

8.5.1 Respond to Submission Comments

PERMIT APPLICATION PHASE

This Permit Application Phase should not include any additional design issues. Design documents shall be 100% complete at the Final Design Phase.

8.6 Permit Application Submission Requirements

- 8.6.1 8.6.7: If all of the deliverables of these sections have been previously submitted to DPMC and approved there are no further deliverables due at this time
- 8.6.8 Regulatory Agency Approvals(a) UCC Permit Application & Technical Sub-codes completed by A/E
- 8.6.10 Signed and Sealed Drawings: 6 sets
- 8.6.11 Signed and Sealed Specifications: 6 sets
- 8.6.12 Current Working Estimate/Cost Analysis
- 8.6.13 Bar Chart Schedule
- 8.6.14 Project Presentation (N/A this Project)
- 8.6.15 Plan Review/SOW Compliance Statement
- 8/6.16 Submission Checklist

8.7 Approvals

8.8 Submission Forms

Figure 8.4.12	Current Working Estimate/Cost Analysis
Figure 8.4.16	Submission Checklist (Final Review Phase)
Figure 8.6.12-b	Bid Proposal Form (Form DPMC -3)
Figure 8.6.12-c	Notice of Advertising (Form DPMC -31)
Figure 8.6.16	Submission Checklist (Permit Phase)
Figure 8.7	Bid Clearance Form (Form DPMC -601)

BIDDING AND CONTRACT AWARD

9.0 Bidding Phase Requirements

- 9.0.1 Original Drawings signed & sealed by A/E, one (1) set AUTOCAD Discs
- 9.02 One Unbound Specification Color Coded per A/E Manual Section 8.4.11
- 9.03 Bid Documents Checklist
- 9.04 Bid Proposal Form
- 9.05 Notice for Advertising

9.1 Chair Pre-Bid Conference/Mandatory Site Visit

- 9.2 **Prepare Bulletins**
- 9.3 Attend Bid Opening
- 9.4 Recommendation for Contract Award
 - 9.4.1 Prepare Letter of Recommendation for Award & Cost Analysis
- 9.5 Attend Pre-Construction Meeting
- 9.6 Submission Checklist

9.7 Submission Forms

Figure 9.4.1	Cost Analysis
Figure 9.6	Submission Checklist

CONSTRUCTION PHASE

10.1 Site Construction Administration

10.2 Pre-Construction Meeting

10.3 Construction Job Meetings

- 10.3.1 Agenda: Schedule and Chair Construction Job Meetings
- 10.3.2 Minutes: Prepare and Distribute Minutes within 5 working days of meeting
- 10.3.3 Schedules; Approve Contractors' Schedule & Update
- 10.3.4 Minutes Format: Prepare Job Meeting Minutes in approved format, figure 10.3.4-a

10.4 Correspondence

- **10.5** Prepare and Deliver Conformed Drawings
- **10.7** Approve Contractors Invoicing and Payment Process
- **10.8** Approve Contractors 12/13 Form for Subs, Samples and Materials
- **10.10** Approve Test Reports

10.11 Approve Shop Drawings

10.12 Construction Progress Schedule

10.12.1 Construction Progress Schedule

10.13 Review & Recommend or Reject Change Orders

- 10.13.1 Scope Changes
- 10.13.2 Construction Change Orders
- 10.13.3 Field Changes

10.14 Construction Photographs

10.15 Submit Field Observation Reports

10.16 Submission Forms

Figure 10.3.4-a	Job Meeting Format of Minutes
Figure 10.3.4-b	Field Report
Figure 10.6	DPMC Insurance Form-24
Figure 10.6-a	Unit Schedule Breakdown
Figure 10.6-b	Monthly Estimate for Payment to Contractor DPMC 11-2
Figure 10.6-c	Monthly Estimate for Payment to Contractor DPMC 11-2A
Figure 10.6-d	Invoice DPMC 11
Figure 10.6-e	Prime Contractor Summary of Stored Materials DPMC 11-3
Figure 10.6-f	Agreement & Bill of Sale certificate for Stored Materials DPMC 3A
Figure 10.7-a	Approval Form for Subs, Samples & Materials DPMC 12
Figure 10.7-b	Request for Change Order DPMC 9b
Figure 10.9	Transmittal Form DPMC 13
Figure 10.10	Submission Checklist

PROJECT CLOSE-OUT PHASE

- 11.1 Responsibilities: Plan, Schedule and Execute Close-Out Activities
- 11.2 Commencement: Initiate Close-Out w/DPMC 20A Project Close-Out Form
- **11.3 Develop Punch List & Inspection Reports**
- **11.4** Verify Correction of Punch List Items

11.5 Determination of Substantial Completion

11.6 Ensure Issuance of "Temporary Certificate of Occupancy or Approval"

11.7 Initiation of Final Contract Acceptance Process

11.8 Submission of Close-Out Documentation

- 11.8.1 As-Built & Record Set Drawings, 3 sets AUTOCAD Discs Delivered to DPMC
- 11.8.2 (a) Maintenance and Operating manuals, Warranties, etc.: 7 sets each Include electronic format and DVD's of Training Videos
 - (b) Guarantees
 - (c) Testing and Balancing Reports
 - (d) Boiler Inspection Certificates
 - (e) Shop Drawings
 - (f) Letter of Contract Performance
- 11.8.3 Final Cost Analysis-Insurance Transfer DPMC 25
- 11.8.4 This Submission Checklist

11.9 Final Payment

- 11.9.1 Contractors Final Payment
- 11.9.2 A/E Invoice and Close-Out Forms for Final Payment

11.10 Final Performance Evaluation of the A/E and the Contractors

11.11 Ensure Issuance of a "Certificate of Occupancy or Approval"

11.12 Submission Forms

Figure 11.2Project Close-Out Documentation List DPMC 20AFigure 11.3-aCertificate of Substantial Completion DPMC 20DFigure 11.3-bFinal Acceptance of Consultant Contract DPMC 20CFigure 11.5Request for Contract Transition Close-Out DPMC 20XFigure 11.7Final Contract Acceptance Form DPMC 20Figure 11.8.3-aFinal Cost AnalysisFigure 11.8.3-bInsurance Transfer Form DPMC 25Figure 11.8.4Submission Checklist

XV. EXHIBITS

The attached exhibits in this section will include a sample project schedule, and any supporting documentation to assist the Consultant in the design of the project such as maps, drawings, photographs, floor plans, studies, reports, etc.

END OF SCOPE OF WORK

February 7, 1997 Rev.: January 29, 2002

Responsible Group Code Table

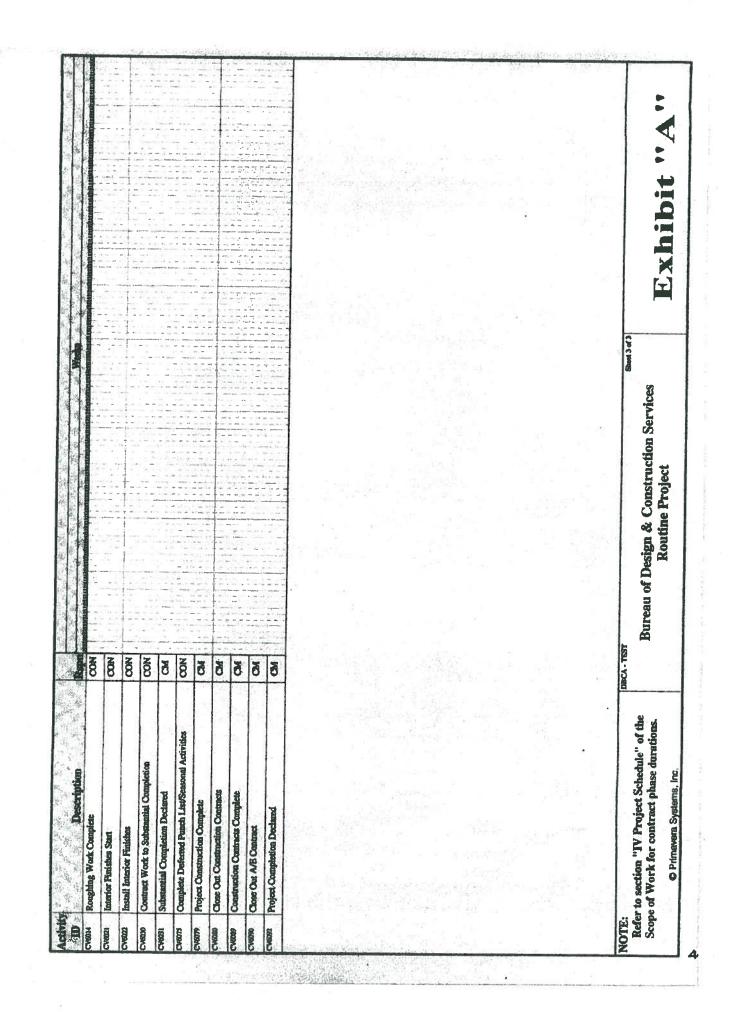
The codes below are used in the schedule field "GRP" that identifies the group responsible for the activity. The table consists of groups in the Division of Property Management & Construction (DPMC), as well as groups outside of the DPMC that have responsibility for specific activities on a project that could delay the project if not completed in the time specified. For reporting purposes, the groups within the DPMC have been defined to the supervisory level of management (i.e., third level of management, the level below the Associate Director) to identify the "functional group" responsible for the activity.

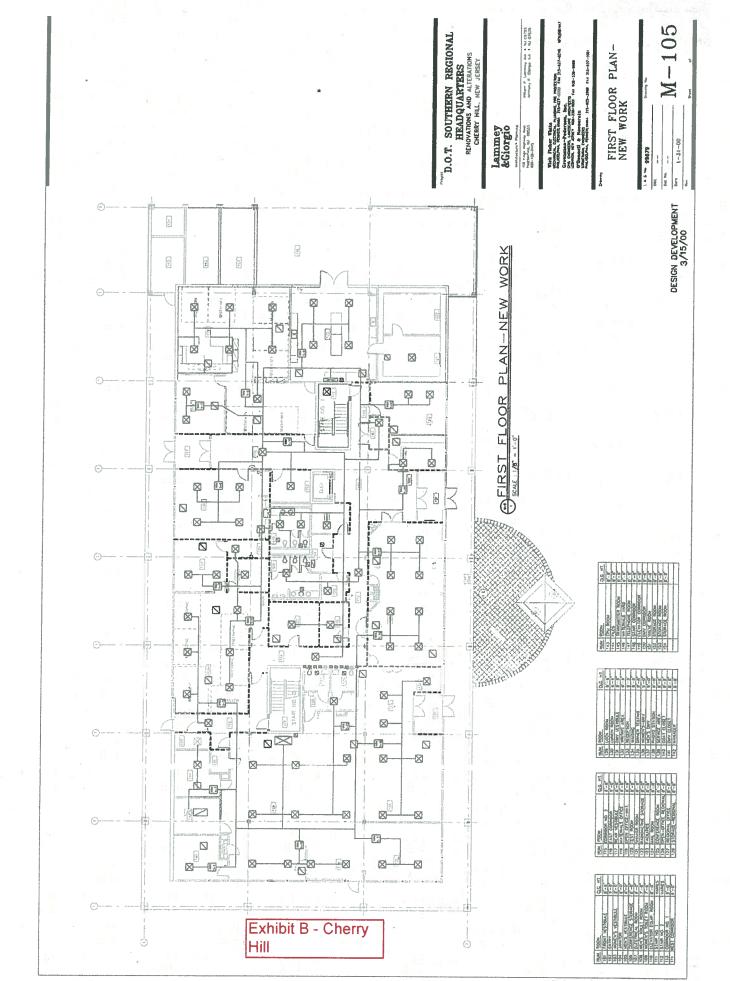
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×	СМ	Contract Management Group	Contract Management
	CA	Client Agency	N/A
	CSP	Consultant Selection and Prequalification Group	Technical Services
	A/E	Architect/Engineer	N/A
	PR	Plan Review Group	Technical Services
	CP	Construction Procurement	Planning & Administration
	CON	Construction Contractor	N/A
	FM	Financial Management Group	Planning & Administration
	OEU	Office of Energy and Utility Management	N/A
	PD	Project Development Group	Planning & Administration

EXHIBIT 'A'

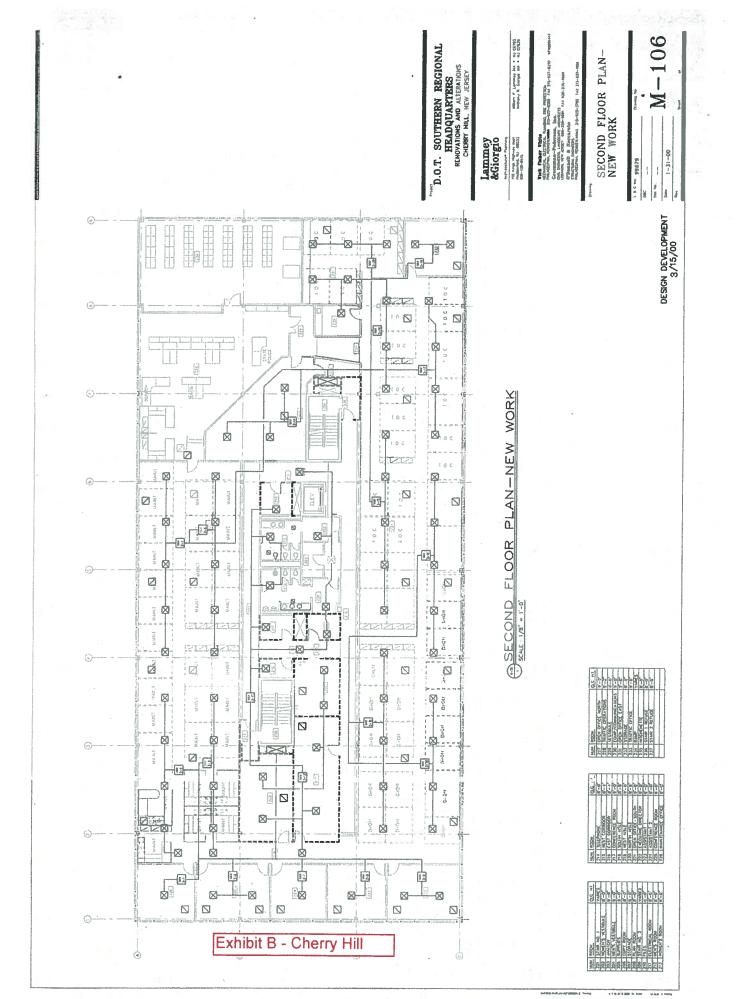
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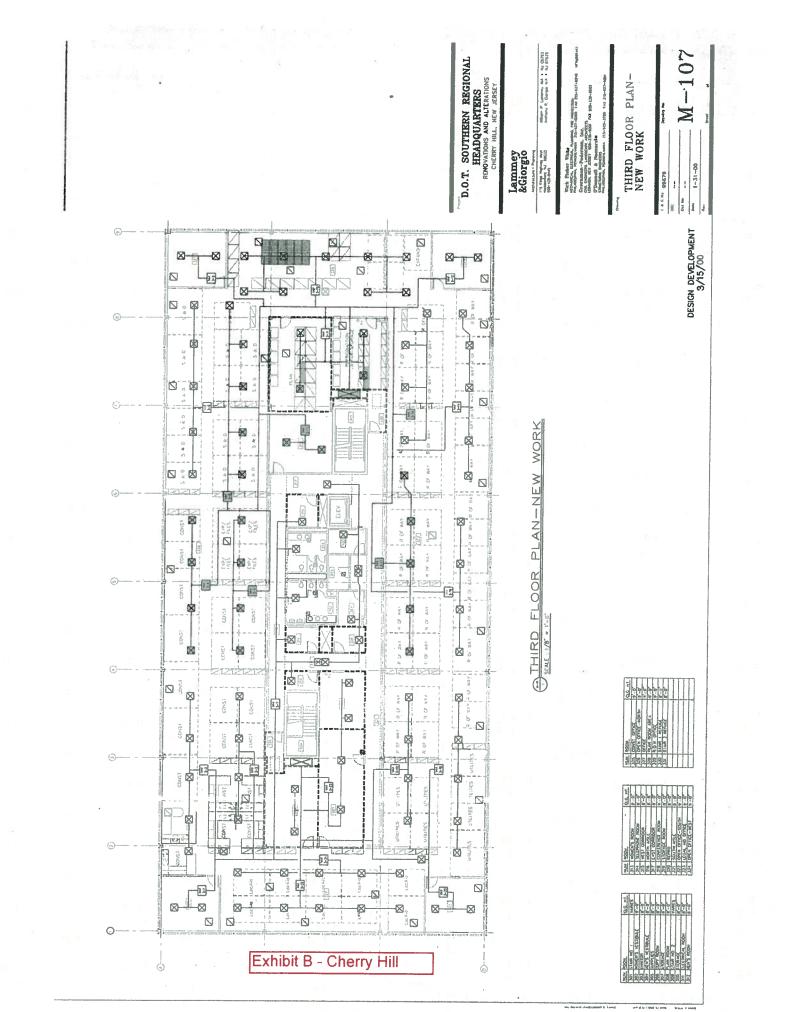
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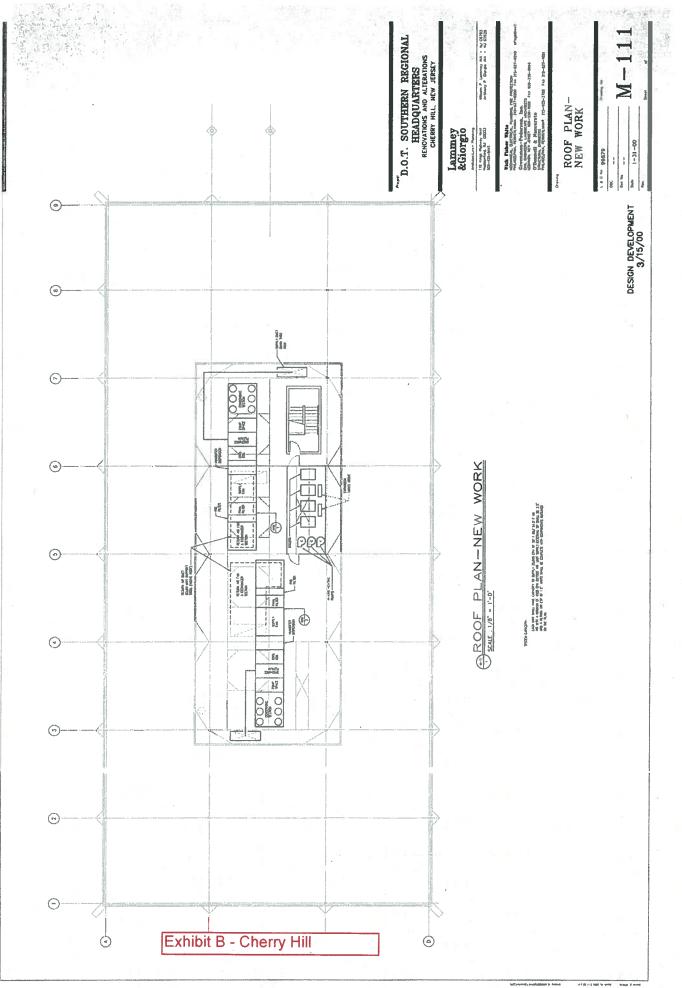




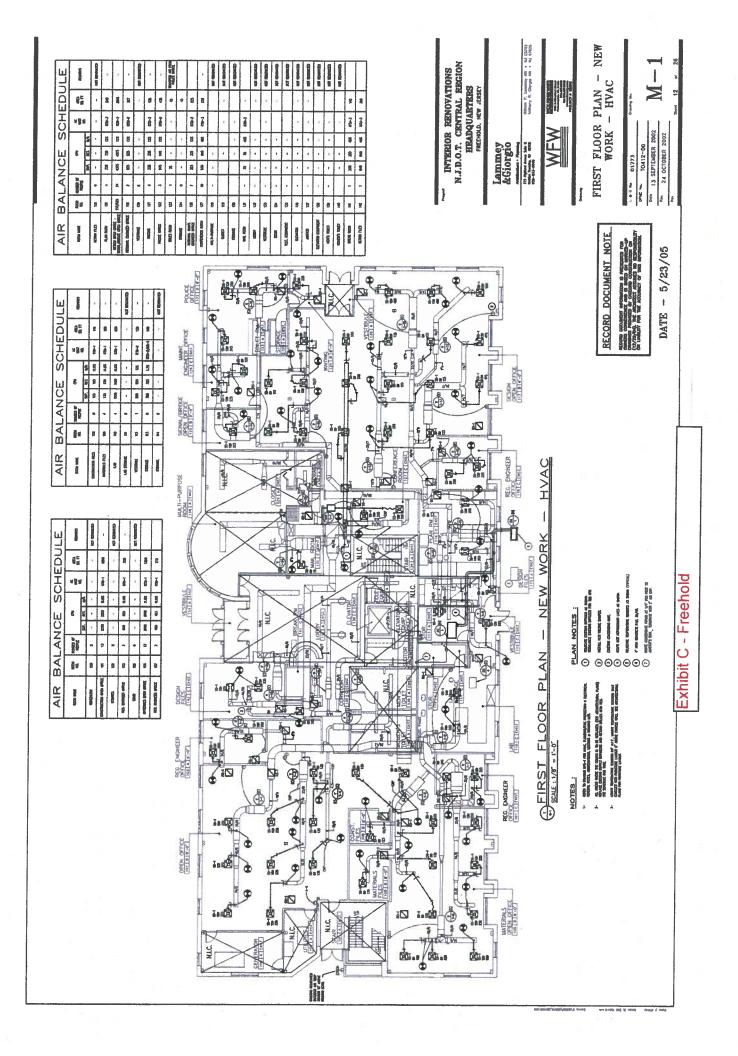
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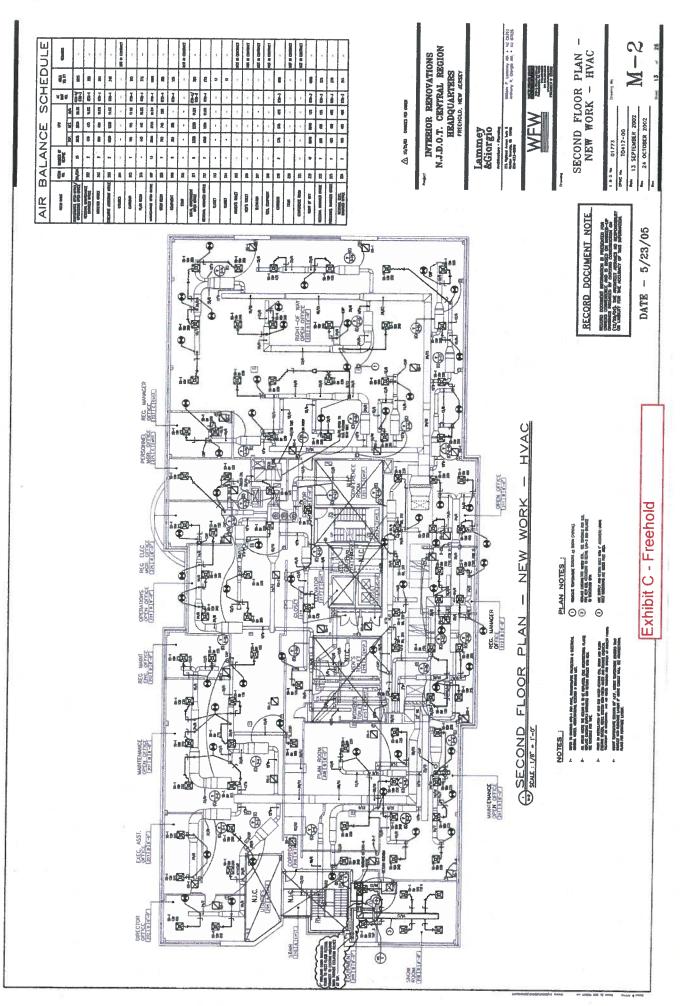


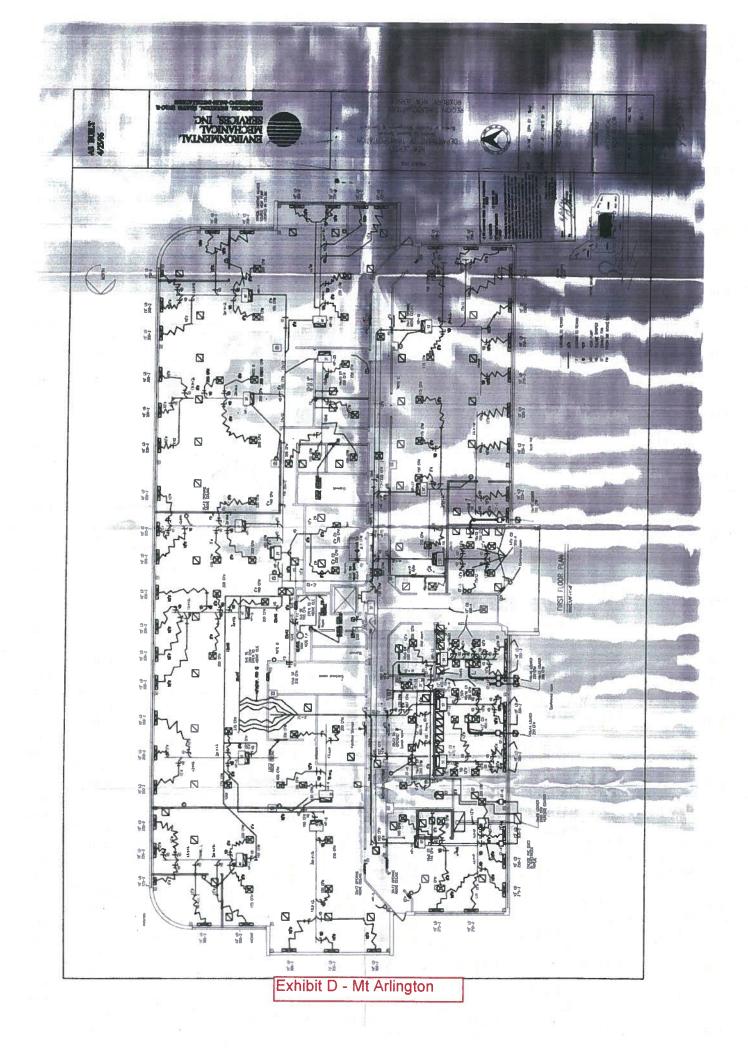


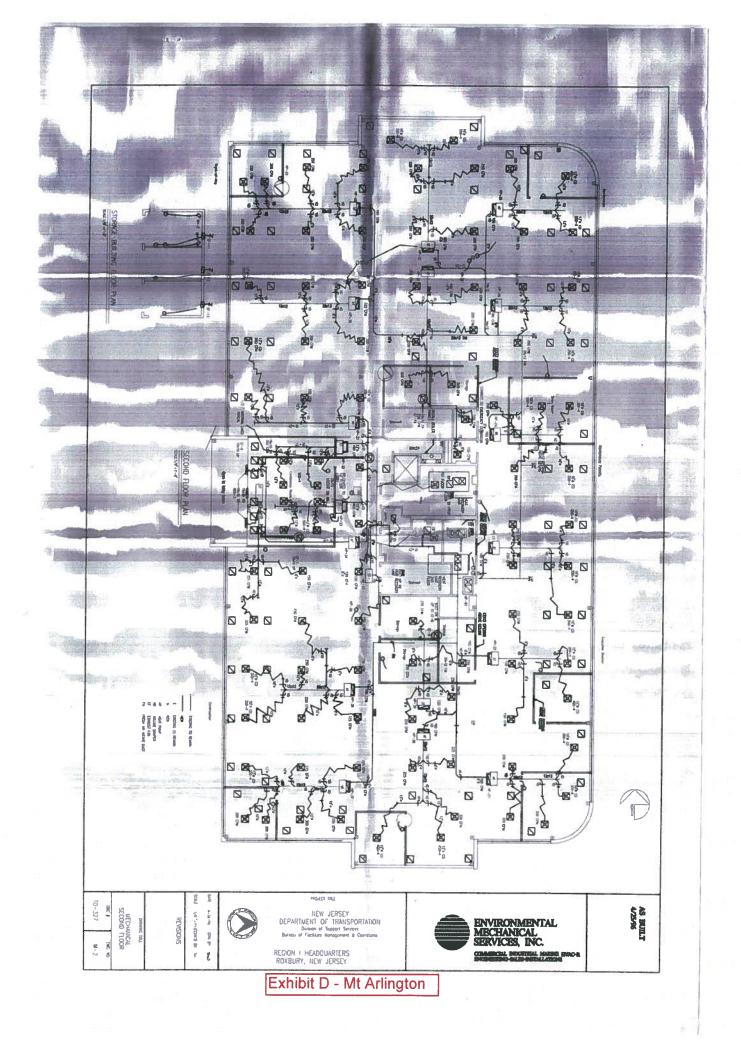


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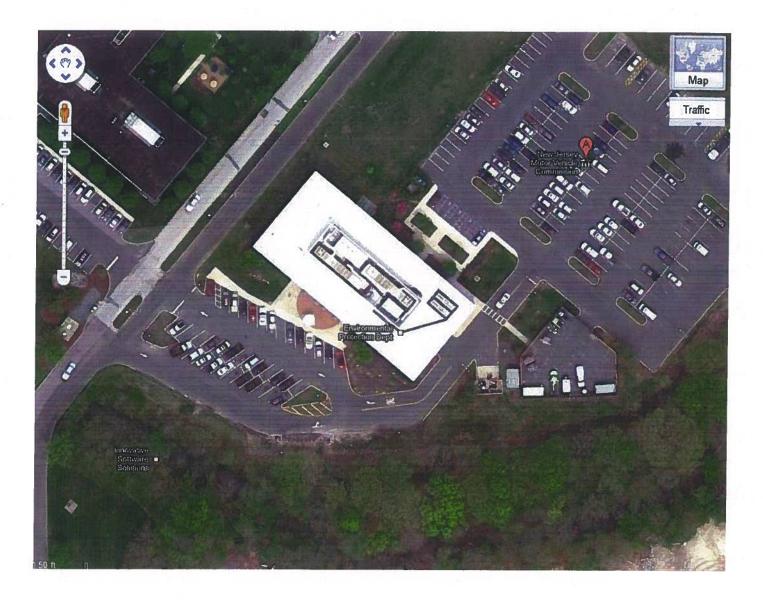


Exhibit E - Cherry Hill

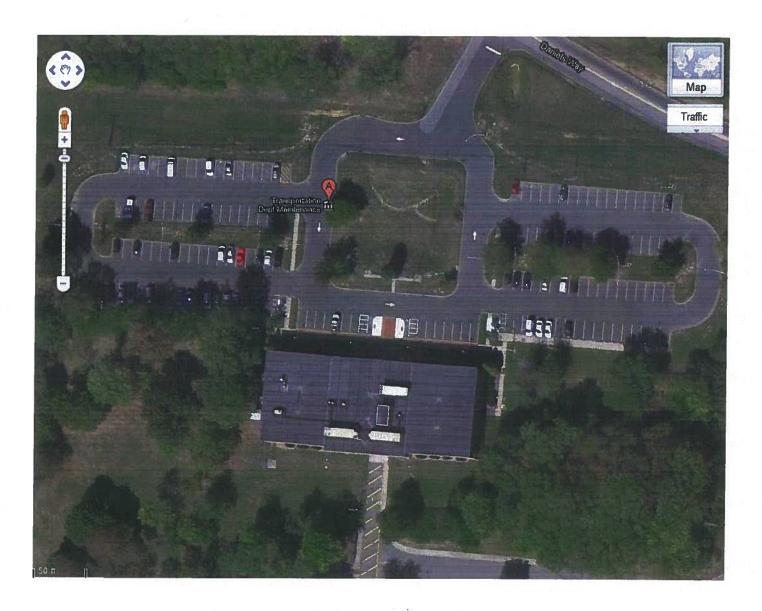


Exhibit E - Freehold



Exhibit E - Mt Arlington