

SCOPE OF WORK

New Fire Detection and Suppression System

NJDOT South Region Headquarters
Cherry Hill, Camden County, N.J.

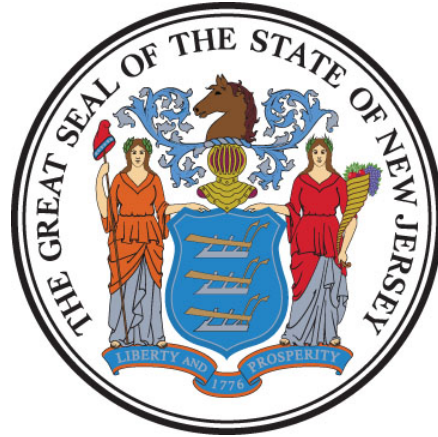
Project No. T0648-00

STATE OF NEW JERSEY

Honorable Philip D. Murphy, Governor
Honorable Sheila Y. Oliver, Lt. Governor

DEPARTMENT OF THE TREASURY

Elizabeth Maher Muoio, Treasurer



DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Christopher Chianese, Director

Date May 13, 2021

TABLE OF CONTENTS

SECTION	PAGE
I. OBJECTIVE	6
II. CONSULTANT QUALIFICATIONS	6
A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS.....	6
III. PROJECT BUDGET	6
A. CONSTRUCTION COST ESTIMATE (CCE)	6
B. CURRENT WORKING ESTIMATE (CWE)	6
C. CONSULTANT’S FEES	7
IV. PROJECT SCHEDULE	7
A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE	7
B. CONSULTANT’S PROPOSED DESIGN & CONSTRUCTION SCHEDULE	8
C. CONSULTANT DESIGN SCHEDULE	8
D. BID DOCUMENT CONSTRUCTION SCHEDULE	8
E. CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE	9
V. PROJECT SITE LOCATION & TEAM MEMBERS.....	9
A. PROJECT SITE ADDRESS.....	9
B. PROJECT TEAM MEMBER DIRECTORY	10
1. DPMC Representative:	10
2. Department of Transportation:.....	10
VI. PROJECT DEFINITION	10
A. BACKGROUND	10
B. FUNCTIONAL DESCRIPTION OF THE BUILDING.....	10
VII. CONSULTANT DESIGN RESPONSIBILITIES.....	11
A. GENERAL.....	11
B. EXISTING WATER SUPPLY.....	12
C. NEW FIRE SUPPRESSION SYSTEM DESIGN CRITERIA.....	14
D. CLEAN AGENT SYSTEM.....	17
1. General:.....	17
2. Detection, Actuation, Alarms, and Control Systems:	17
3. Design Documents:.....	18
4. System Flow Calculations:	18
E. FIRE DETECTION SYSTEM.....	18

1.	New System Design Criteria:.....	18
2.	System Tests:	19
3.	Spare Parts:	20
F.	GENERAL DESIGN OVERVIEW	20
1.	Design Detail:	20
2.	Specification Format:.....	21
3.	Submittal Schedule:	21
4.	Construction Cost Estimates:	21
G.	PROJECT COMMENCEMENT	22
1.	Project Directory:.....	22
2.	Site Access:.....	22
3.	Project Coordination:	22
4.	Existing Documentation:	22
5.	Scope of Work:	23
6.	Project Schedule:	23
H.	BUILDING & SITE INFORMATION.....	23
1.	Building Classification:	23
2.	Building Block & Lot Number:	24
3.	Building Site Plan:	24
4.	Site Location Map:.....	24
I.	DESIGN MEETINGS & PRESENTATIONS.....	24
1.	Design Meetings:	24
2.	Design Presentations:.....	25
J.	CONSTRUCTION BID DOCUMENT SUBMITTAL	25
VIII. CONSULTANT CONSTRUCTION RESPONSIBILITIES		25
A.	GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW	25
B.	PRE-BID MEETING	25
C.	POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD	26
1.	Post Bid Review:.....	26
2.	Review Meeting:.....	26
3.	Substitutions:.....	26
4.	Schedule:.....	27
5.	Performance:	27
6.	Letter of Recommendation:	27
7.	Conformed Drawings:.....	28
D.	DIRECTOR’S HEARING	28
E.	CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS.....	28
1.	Meetings:.....	28
2.	Schedules:	29
3.	Submittal Log:	29
F.	CONSTRUCTION SITE ADMINISTRATION SERVICES.....	29
G.	SUB-CONSULTANT PARTICIPATION.....	30

H.	DRAWINGS	30
1.	Shop Drawings:.....	30
2.	As-Built & Record Set Drawings:	31
I.	CONSTRUCTION DEFICIENCY LIST	31
J.	INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION	31
K.	CLOSE-OUT DOCUMENTS	32
L.	CLOSE-OUT ACTIVITY TIME.....	32
M.	TESTING, TRAINING, MANUALS AND ATTIC STOCK	32
1.	Testing:	32
2.	Training:.....	32
3.	Operation & Maintenance Manuals:.....	33
4.	Attic Stock:	33
N.	CHANGE ORDERS	34
1.	Consultant:	34
2.	Contractor:	34
3.	Recommendation for Approval:	34
4.	Code Review:.....	35
5.	Cost Estimate:	35
6.	Time Extension:	35
7.	Submission:.....	36
8.	Meetings:.....	36
9.	Consultant Fee:	36
IX.	PERMITS & APPROVALS.....	36
A.	NJ UNIFORM CONSTRUCTION CODE PERMIT	36
1.	Prior Approval Certification Letters:	37
2.	Multi-building or Multi-site Permits:.....	37
3.	Special Inspections:	37
B.	OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS.....	38
C.	STATE INSURANCE APPROVAL	38
D.	PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM.....	39
E.	PERMIT MEETINGS.....	39
F.	MANDATORY NOTIFICATIONS	39
G.	CONSULTANT FEE.....	39
X.	GENERAL REQUIREMENTS	40
A.	SCOPE CHANGES	40
B.	ERRORS AND OMISSIONS.....	40
C.	ENERGY INCENTIVE PROGRAM	40
XI.	ALLOWANCES	40
A.	PERMIT FEE ALLOWANCE	40

1. Permits:	41
2. Permit Costs:.....	41
3. Applications:.....	41
4. Consultant Fee:	41
B. WATER SUPPLY UPGRADE ALLOWANCE	41
XII. SUBMITTAL REQUIREMENTS.....	42
A. CONTRACT DELIVERABLES	42
B. CATALOG CUTS	42
C. PROJECT DOCUMENT BOOKLET	42
D. DESIGN DOCUMENT CHANGES	42
E. SINGLE-PRIME CONTRACT	42
XIII. SOW SIGNATURE APPROVAL SHEET	44
XIV. CONTRACT DELIVERABLES	45
XV. EXHIBITS.....	51
A. SAMPLE PROJECT SCHEDULE FORMAT	
B. PROJECT SITE LOCATION MAP	
C. PHOTOS	
D. CHERRY HILL FIRE DEPARTMENT FLOW TEST	

I. OBJECTIVE

The objective of this project is to install an automatic sprinkler and fire detection system in the Department of Transportation Cherry Hill Headquarters building, including the penthouse area, so that the entire building has sprinkler coverage. A clean agent fire suppression system will be required for the Traffic Operations and Data Center on the second floor.

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 following discipline(s):

- **P010 Fire Protection Engineering**

The Consultant shall also have in-house capabilities or Sub-Consultants pre-qualified with DPMC in:

- **P004 Plumbing Engineering**
- **P025 Estimating/Cost Analysis**
- **P043 Fire Detection Systems**

As well as, **any and all** other Architectural, 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 \$1,210,000.

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 \$1,683,000.

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. 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. Site Access Approvals & Schedule Design Kick-off Meeting	14
2. Investigation Phase	28
• <i>Project Team & DPMC Plan/Code Unit Review & Comment</i>	14
3. Design Development Phase 50% (Minimum)	42
• <i>Project Team & DPMC Plan/Code Unit Review & Comment</i>	14
4. Final Design Phase 100%	42
• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
5. Final Design Re-Submission to Address Comments	7
• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
6. Permit Application Phase	7
• <i>Issue Plan Release</i>	
7. Bid Phase	42

8. Award Phase	28
9. Construction Phase	120

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

Based on the Notice to Proceed, Consultant shall update their approved schedule and shall distribute it at the design kickoff meeting. Note that this schedule shall be submitted in both paper format and on compact disk in a format compatible with *Microsoft Project*. 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 and Bulletins that may be issued on the project.

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, 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 ADDRESS

The location of the project site is:

1 Executive Campus
Rt. 70 & Cuthbert Blvd.
Cherry Hill, New Jersey 08002

See **Exhibit ‘B’** for the project site location map.

B. PROJECT TEAM MEMBER DIRECTORY

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

1. DPMC Representative:

Name: Ronald Kraemer, Project Manager
Address: Division Property Management & Construction
20 West State Street, 3rd Floor
Trenton, NJ 08608-1206
Phone No: (609) 633-7186
E-Mail No: Ronald.Kraemer@treas.nj.gov

2. Department of Transportation:

Name: Jitendra Patel, Principal Engineer
Address: Department of Transportation
1035 Parkway Ave., PO Box 600
Trenton, New Jersey 08625
Phone No: (609) 963-2190
E-Mail No: Jitendra.Patel@dot.nj.gov

VI. PROJECT DEFINITION

A. BACKGROUND

The NJ Department of Transportation fulfills their mission in the southern part of the state out of their South Region Headquarters Building that is located at 1 Executive Campus off of Route 70 in Cherry Hill Township, Camden County, New Jersey. The NJ Motor Vehicle Commission is a tenant and occupies a portion of the first floor of the building. The NJ Department of Transportation occupies the rest of the 1st floor of the building and all of the second and third floors. The new fire detection and suppression system shall be installed in the entire building and include the spaces that are occupied by both agencies.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

The building is located at 1 Executive Campus and Route 70 in Cherry Hill, New Jersey. It is a three (3) story steel frame structure building totaling 50,500 square feet and is occupied by

NJDOT and NJMVC. The State purchased the building in the mid 1990's and subsequently renovated it for the current use.

The building does contain a sprinkler system but it is confined to the mechanical spaces, plan and file storage areas and a few other ancillary spaces. The existing system is comprised of two different metals and galvanic corrosion has occurred resulting in numerous leaks over the years. This problem will be addressed through the complete removal and replacement of the existing sprinkler system. The existing fire detection system will also be replaced.

The existing service is combined for the fire and water supply. The consultant shall provide a design for a new fire main service separate from the water service.

The building houses the DOT South Region Traffic Operations and Data Center on the second floor. A clean agent fire suppression system shall be installed in this area and be backed up by a pre-action system.

Hydrant flow tests were conducted last year. See **Exhibit 'D'**. These results shall be confirmed with new tests.

It is desired that all construction work take place after working hours. The normal working hours are 7:30 AM to 4:00 PM Monday through Friday. The Traffic Operation Center hours are 4:00 AM to 8:30 PM Monday through Friday. The MVC working hours are Monday to Friday- 8:00 AM to 4:30 PM; Saturday- 8:00 AM to 3:00 PM.

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. INVESTIGATION PHASE

The Consultant shall provide construction documents for the complete removal and replacement of the existing fire detection and sprinkler system. A clean agent system is required for the data center on the second floor.

Investigate the existing fire suppression system in the building to identify those areas that will require fire suppression systems and related components. Document the location of the fire alarm panels, zone detectors, sensors, wiring & raceways, and all equipment and systems that are monitored by the panels.

Items to investigate shall include, but not be limited to, the fire suppression water supply system, fire detection system devices and operation, wiring, ceiling impact and cost estimates. Review requirements for the addition of carbon monoxide detectors.

Investigate and identify requirements for a clean agent fire suppression system, backed up by a pre-action system, to protect the Traffic Operations and Data Center on the second floor. Identify requirements to separate the server room from the adjoining office space.

Provide a description of the agent storage container(s) required including location, the agent being used, internal volume, storage pressure, and nominal capacity expressed in units of agent mass or volume at standard conditions of temperature and pressure.

Investigate the interior of the buildings and show all existing spaces, ceiling construction, location of walls and partitions, and the occupancy of each room on the drawings. Identify the location of all equipment located above the ceilings to determine the appropriate routing of the new sprinkler mains, branches, and head locations. Provide a design to relocate any existing equipment necessary to install the new sprinkler system such as conduit, piping, ductwork, suspended ceiling system components, panels, light fixtures, mechanical equipment, etc.

B. EXISTING WATER SUPPLY

Survey the existing water supply system of the facility to determine if the capacity is adequate for the new fire suppression system.

1. Hydrant Tests:

The Consultant and/or a pre-qualified Testing Lab shall conduct field tests of the nearest fire hydrants and determine the static and residual pressures and flow rates of water being supplied to the buildings. Schedule the fire hydrant testing such that representatives of the Client Agency, DPMC Code Plan Review Unit, the local fire department, the local municipal water company and the DCA code inspector may witness the test. All costs associated with the hydrant tests shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

2. Hydraulic Calculations:

The hydrant test results shall be used as the basis for hydraulic calculations to verify that there is adequate water pressure volume and flow for the building sprinkler systems. Signed and sealed calculations must be submitted to the DPMC Plan & Code Review Unit for record, review and approval. The Consultant shall estimate the costs associated with the potential requirement to upgrade the building water supply system and enter that amount in their fee proposal line item entitled “**Water Supply Upgrade Allowance**”, refer to paragraph XI.B.

3. Water Supply System Upgrade Design Criteria:

The potential water supply design shall include all upgrades to the existing water delivery system required to meet codes for a fully suppressed building. Provide details on the drawings and information for all new water supply components such as: pumps and control systems, water supply lines, gate valves, water meters and pits, line flushing valves, line flushing procedure, fire hydrants, restraints, valve boxes, manholes, permit requirements, etc. Size any new water supply line to provide suppression for the remaining portion of the buildings.

4. Water Supply Upgrade Allowance:

The existing service is combined for the fire and water supply. The consultant shall provide a design for a new fire main service separate from the water service.

If the underground water supply line must be replaced or upgraded or a new waterline needs to be installed, the Consultant shall show the dimensioned location and elevation of the new water line and all existing underground utility lines in that construction area. This information will eliminate the potential of the lines intersecting at critical crossing points. Drawings shall show the path of the new water line from the existing water main and shall indicate the size and length.

Details showing the location and method of the potential new water line tie-in to the main lines shall be shown on the drawings including the new water meter and meter pits if required. The line shall have individual water line shut off valves and detector double check backflow preventer device. Identify how the main water line will be restrained from movement on the plans with details such as thrust blocks, tie rods or mechanical joints. Include all tests, procedures, and disinfection requirements for the water line. Provide construction administration services during all phases of the water line installation

Pipe trenching size details, bedding, backfill materials, and dewatering requirements shall be identified on the drawings. Include all site restoration work needed including lawn areas, sidewalks and driveways. If roadway repaving is required, provide exact details of paving depths and construction materials and methods that comply with DOT standards.

All design coordination and submissions, meetings, permits and approval requirements with the local utility companies must be determined and provided by the Consultant.

The Consultant shall estimate the costs associated with the potential requirement to upgrade the building water supply systems, including a new fire pump, and enter that amount in their fee proposal line item entitled “**Water Supply Upgrade Allowance**”. Refer to paragraph XI.B.

C. NEW FIRE SUPPRESSION SYSTEM DESIGN CRITERIA

1. Design Documents:

A fully engineered and code approved design of the new sprinkler system shall be provided by the Consultant. The design shall include, but not be limited to a scaled layout of the new sprinkler piping and all related system components. The system layout shall be shown on the current interior floor plan of the building and coordinated with the ceilings, lighting, HVAC ductwork and diffusers, wiring conduit, and other obstructions. Identify the location of all walls, partitions, concealed spaces, closets, and bathroom areas. The design shall be in accordance with NFPA 13 (2013) and the International Building Code (IBC).

Provide fire protection for all material storage areas and identify the storage commodity description and classification, storage area height, and storage arrangement.

Design documents and specifications shall indicate the type of system and the name of the desired manufacturer and two alternate manufacturers of each type of equipment proposed including but not limited to: pipe material, size and wall thickness, and center to center dimension of the sprinkler heads, control valves, check valves, backflow preventers, line flushing valves, drain pipes, air compressors, jockey pumps, fire pumps, and test connections, etc. Details of the hanger type and location, sleeves, braces, and methods of securing the sprinkler system shall be provided including calculations that indicate they meet all support and seismic requirements.

A statement shall be included in the specifications and on the drawings that states: "If the sprinkler Contractor prepares shop drawings that differ in design from those supplied by the Consultant, they shall submit them, **through the consultant**, to DPMC Plan & Code Review Unit for approval prior to fabrication and installation of the system".

2. Fire Detection System Integration:

The new sprinkler system, sprinkler main valve supervision, flow and tamper switches must be integrated with the new fire detection system in the building and must comply with both NFPA 13 and NFPA 72.

In addition, the consultant shall provide the design for the integration of the fire suppression system in the recently installed Honeywell Niagara BMS system. Also, provide the design for system sequence of operations for integration of new fire alarm and sprinkler system into the existing installed HVAC system.

3. Sprinkler System Valves & Drains:

Provide all system wet and dry valves, compressors, and Siamese connections per the requirements of NFPA 13. All hydrants, control valves, check valves, backflow preventers, line flushing valves, drain pipes, air compressors, jockey pumps, fire pumps, and test connections shall be shown.

Each system shall have a single control valve designed to shut off both the domestic and sprinkler systems and a separate valve for the domestic system only. The sprinkler system main valve supervision, flow and tamper switches must be integrated with the fire detection system of the building and must comply with NFPA 72 current code.

Design all test valves and drains as needed. As applicable, dry systems must be designed to completely drain after testing without special procedures and no low spots will be allowed in the piping. It is preferred that all drains shall discharge to the exterior of the building.

Where required by the Insurance Underwriter or Client Agency, provide durable locks and chains for each interior valve controlling water to a sprinkler or standpipe system and each outside valve controlling fire water into the building or on the site, so that these valves may be locked in the fully open position.

All control, drain, and test connection valves shall be provided with permanently marked weather proof metal or rigid plastic identification signs attached with corrosion resistant materials.

4. Pipe Penetration:

All new piping installed in the buildings shall be sealed where it passes through the floors and walls of the structure and the material must afford the required fire rating of that floor and wall. Details of the pipe penetrations shall be included on the design drawings indicating the type of penetration, how they will be sealed and the type of material to be used.

5. Sprinkler Riser Diagram:

A sprinkler piping riser diagram shall be provided identifying the routing and interface of the new system piping to the existing or upgraded water supply line and related components. The drawings shall provide a full height cross section of the area where the sprinkler system is being installed including the ceiling construction and location of any structural obstructions. Drawings shall include all standard fire safety symbols and occupancy of each area or room.

6. Building Interior Finishes:

The design documents shall address the restoration of all building interior finishes that are impacted by the installation of the fire suppression system component items such as the sprinkler pipe, attachment devices, heads, soffits, ceiling tiles, etc.

Finishes shall include, but not be limited to patching, painting, and the relocation of lighting, signage, alarms, ventilators, louvers, curtain tracts, wood trim, ceiling systems, etc. necessary to install the sprinkler pipe, attachment devices, heads and all other components of the system.

Procedures required to control and eliminate odors related to paint, cleaning agents, etc. must be addressed in the design documents to prevent potential problems with the building occupants. Materials with minimal odors and fumes should be specified.

7. Seismic Design:

Design shall conform to all seismic design requirements for the construction site locations.

8. Riser Main Drain Connection:

Each fire suppression pipe riser shall have its own main drain connection. This connection will be run "full open" for two minutes to measure flow and pressure of the system during the annual test. Gauge connections shall also be provided. The discharge point of these drains shall be at a location that will not cause damage to the building.

9. Sprinkler System Controls:

Sprinkler system controls shall be vertically mounted and accessible without the need for a ladder. Service side and system side pressure gauges shall be provided installed and legible from a standing position

10. System Operation:

The existing fire detection system must remain operational during the installation of new system components and the installation of the new fire suppression system.

11. Sanitation:

Sanitation requirements such as flushing of the lines, chemical treatments, and pipe cleaning details shall be included in the design documents for all piping components. Readily removable fittings shall be provided at the end of all cross mains to facilitate the flushing process.

12. Structural Calculations:

Provide structural calculations confirming that the building can support the increased load from the new sprinkler system.

13. Equipment Tests:

Upon completion of the project, and prior to issuance of the Certificate of Approval, the Contractor shall test the complete fire suppression and detection system making adjustments as required to secure all necessary approvals. The Consultant shall identify the testing requirements in the specifications including the hydrostatic test pressures, the test duration under pressure, and the amount of allowable leakage per hour.

All equipment testing shall be conducted in the presence of the Consultant and designated representatives of the DPMC, Client Agency, Contractors and DCA. The Consultant shall be responsible for the coordination and scheduling of all tests. All test results shall be collected and bound in a manual for reference.

Locate test/drain connections so that their discharge will not cause damage to the building or site. Provide splash blocks where test and drain connections are discharged to grade. All test stations shall be located in areas where testing does not affect occupants or programs, and water discharge does not pool or freeze.

D. CLEAN AGENT SYSTEM

1. General:

The Consultant shall provide the design and specifications for a clean agent fire protection system for the second floor Traffic Operations and Data Center. The clean agent system shall be backed up by a pre-action system. Provide the design and specifications to fully separate the protected server room from the adjoining office space.

The consultant shall provide the design and specifications for complete separation of the server room from the traffic operations center in the event of a clean agent discharge. The design shall address wall, ceiling, door and floor upgrades as necessary.

2. Detection, Actuation, Alarms, and Control Systems:

Provide a schematic drawing showing the tie in method of all detectors, actuation devices, alarms, and control systems to a new fire alarm control panel. Provide a complete step by step description of the system sequence of operations including functioning of abort and maintenance switches, delay timers, and emergency power shutdown.

3. Design Documents:

Provide detailed drawings showing the computer rooms; hallways, walls, agent distribution system including the agent storage container location; piping and nozzle locations; type of pipe hangers and rigid pipe supports; detection, alarm, and control system including all devices and schematic of wiring interconnection between them; end-of-line device locations; location of controlled devices such as dampers and shutters; and location of instructional signage.

Provide an isometric view of the agent distribution system showing the length and diameter of each pipe segment; node reference numbers relating to the flow calculations; valves and operating devices, fittings including reducers and strainers; and orientation of tees, nozzles including size, orifice port configuration, flow rate, and equivalent orifice area.

4. System Flow Calculations:

System flow calculations shall be performed and one (1) signed and sealed set submitted to the DPMC Code and Design Unit Manager for record.

E. FIRE DETECTION SYSTEM

1. New System Design Criteria:

Provide the design and specifications to replace all of the existing fire alarm detectors, peripheral devices and panels at the facility with a new non-proprietary, addressable system. In addition, address the following as may be applicable.

- Protection of the fire alarm system from electrical surges, spikes, sags, over-voltages, brownouts, and electrical noise.
- Addressability of devices and notifications made to the building fire alarm control panels and the facility main fire alarm remote station panel.
- All programmable devices must be able to have their addresses set without special equipment, tools, or programs. Changing of vandalized heads or devices must be able to be completed by facility maintenance staff without the requirement of special software or tools.
- Software requirements and compatibility with new devices.
- Install heat detectors rather than smoke detectors in high humidity locations.
- Install carbon monoxide detectors in the building.
- As applicable, duct detectors shall be installed so they are accessible for repair or replacement. They shall be located in areas ensuring laminar flow across the detector. Do not locate them downstream of humidity injection points. Each duct detector shall have a LED that can be easily observed and located by the fire company and other interested parties. Each duct sensor shall be self-compensating for the effects of air

velocity, temperature, humidity, and atmospheric pressure and not require field adjustments to compensate for the above effects.

- The building fire alarm control panel shall be wired to all peripheral alarm and initiating devices and tied into remote annunciator panels located in a convenient area near the fire department entrance to the buildings and shall be readily accessible and readily visible to fire fighters. The building fire alarm control panel and annunciator panels shall be tied into the existing or a new electrical power source at their location in the building.
- Consult with facility staff and provide additional annunciator panels in locations as needed.
- Provide a riser diagram drawing for the building fire alarm control panels that identifies their connections to the various circuits and peripheral initiating devices.
- Any new low voltage wiring, if necessary, from the fire alarm panels to the peripheral devices shall be concealed and run in wiremold or conduit, whichever is more appropriate for the building conditions, security requirements, efficiency, and cost effectiveness. Any exposed wiring installed above the ceiling shall be plenum fire rated cable in accordance with NEC Article 760 or must be protected in conduit. Protect exposed fire alarm wiring from potential rodent damage.
- The fire detection systems shall have emergency battery backup that is sized in accordance with all applicable codes. The battery supply shall be calculated to operate loads in a supervisory mode for twenty-four (24) hours for central station systems and remote supervisory systems. Batteries shall be sized at 125% of the calculated size to compensate for deterioration and aging during the battery life cycle. Battery calculations shall be submitted to the DPMC Code & Design Review Unit for record.
- Provide a battery charging circuit for each standby battery bank in the system. The charger shall be automatic in design, adjusting the charge rate to the condition of the batteries. All system battery charge rates and terminal voltages shall be read using the fire alarm control panel LCD display in the service mode indicating directly in volts and amps.
- The building fire alarm panel, annunciators, and each power supply, addressable circuit, audible circuit, visual circuit, amplifier, etc. shall be designed to have 25% spare capacity. System operating hardware shall be functionally expandable by installing additional solid state plug-in modules. Note that the installation of additional plug-in modules shall not require the replacement of existing equipment, components, or accessories.

2. System Tests:

A written "Acceptance Test Procedure" (ATP) for testing the new fire detection system and components, as applicable, shall be prepared by the Consultant in accordance with all applicable codes and standards and included in the specification.

Upon completion of the system installation, the system manufacturer shall be responsible for the performance of the ATP, demonstrating the function of the system and verifying the correct operation of all system components, circuits and programming.

The system test shall be witnessed and approved by the Department of Community Affairs (DCA). The Consultant shall provide ample notification time when arranging the demonstration with DCA, DPMC Project Team members, Client Agency, Contractor, and the equipment manufacturer.

Upon final acceptance of the system, the Contractor shall provide a complete as-built color-coded wiring diagram. The diagram shall include a written statement signed by the Contractor and manufacturer's representative that the diagram has been corrected to include field changes and does represent the system installed.

The fire detection manufacturer shall provide system training to the facility personnel as described in Section VIII, paragraph M of this document.

3. Spare Parts:

A spare parts list shall be prepared and items purchased as part of this project for all critical items necessary for the successful operation of the fire detection system such as detectors, fire alarm fuses, switches, relays, LED lights, etc. Instructions shall be included for the operation and care of the system. Written instructions shall also be included with the final equipment and maintenance brochure.

F. 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 Uniform Construction Code N.J.A.C. 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 review and comply with the DPMC “Plan Review Instructions” which can be found on DPMC’s web site at:

http://www.state.nj.us/treasury/dpmc/lists_and_publications.shtml

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 prepare the construction specifications in the Construction Specifications Institute (CSI) format entitled MasterFormat©, latest edition.

The project construction specifications shall include only those CSI MasterFormat© specification sections and divisions applicable to this specific project.

3. Submittal Schedule:

The Consultant shall include a submittal schedule in Division 1 of the specifications. The schedule (list of required submittals) shall identify the general conditions and/or specification section (number and name) and the type of submittal required (material data, product data, test results, calculations, etc.). The submittal schedule is a compilation of the submittals required on the project and is provided as an aid to the contractor.

4. Construction Cost Estimates:

The Consultant shall include with each design submittal phase identified in Paragraph IV.A, including the Permit Application Phase and Bid Phase, a detailed construction cost estimate itemized and summarized by the divisions and sections of the Construction Specification Institute (CSI) MasterFormat© latest edition applicable to the project.

The detailed breakdown of each work item shall include labor, equipment, material and total costs.

The construction estimate shall include all alternate bid items and all unit price items itemized and summarized by the divisions and sections of the specifications.

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.

The cost estimate shall include descriptions of all allowances and contingencies noted in the estimate.

All cost estimates must be submitted on a DPMC-38 Project Cost Analysis form at each design phase of the project supported by the detailed construction cost estimate. 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.

G. 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.

- **New Jersey Department of Transportation One Executive Campus: Sprinkler Drawings, 12/7/2000, Oliver Sprinkler Company**

- DPMC Project T0584-00: **HVAC Equipment Replacement**, 12/1/2019, LAN Associates

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.

H. 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.

I. 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:

Investigation 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.

J. CONSTRUCTION BID DOCUMENT SUBMITTAL

In addition to submitting construction bid documents as defined in Section XIV Contract Deliverables, Consultant shall submit both specifications and drawings on compact disk (CD) in *Adobe Portable Document Format (.pdf)*.

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. 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 and Project Team members, 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 4.7.5 “Substitutions” 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.

If a CPM Schedule is required, review the provisions and have Contractor acknowledge the responsibility. Ask for the name of the CPM Scheduler and the "ballpark" costs.

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 or other references that may have been provided. Inquire how the Contractor performed with workmanship, schedule, project management, change orders, cooperation, paper work, etc.

6. Letter of Recommendation:

The Consultant shall prepare a Letter of Recommendation for contract award to the Contractor submitting the lowest 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.

7. 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 fourteen (14) 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.

D. 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.

E. CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS

The Consultant shall conduct all of the construction job meetings, to be held bi-weekly for the duration of construction, 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:

Based on the Submittal Schedule in Division 1 of the specifications, the Consultant shall develop and implement a submittal log that includes all of the required project submittals as identified in the general conditions and technical specifications. The submittal log shall be provided to the contractor at the pre-construction meeting. 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: project schedule, schedule of values, shop drawings, 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 the status of all required submissions.

F. 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.

Consultant and Sub-Consultant(s) shall conduct weekly site inspection/field observation visits. Site inspection/field observation visits may be conducted in conjunction with regularly scheduled bi-weekly construction job meetings, depending on the progress of work, for weeks that construction job meetings are scheduled. The Consultant and their Sub-Consultant(s) shall submit a field observation report for each site inspection to the Project Manager within three (3) calendar days of the site visit. 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.

G. 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.

H. 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 seven (7) 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 Resubmit 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 reproducible drawings from DPMC and transfer the AS-BUILT conditions to the original full sized signed reproducible drawings to reflect RECORD conditions within fourteen (14) 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 reproducible drawings to DPMC who will acknowledge their receipt in writing. This hard copy set of drawings and two (2) sets of current release AUTO CAD discs shall be submitted to DPMC. The discs shall contain all AS-BUILT drawings in both ".dwg" (native file format for AUTO CAD) and ".pdf" (*Adobe* portable document format) file formats.

I. 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.

J. 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.

K. 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 fourteen (14) 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.

L. 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.

M. 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 seven (7) 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.

The Consultant shall ensure that the training session is video recorded by the Contractor. A copy of the recording shall be transmitted to the Project Manager on compact disk who will forward the material to the Client Agency for future reference.

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.

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.

N. 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 Approval:

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 (latest edition) for all appropriate divisions and sub-divisions 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 Contractor’s estimate, 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 Article 10.1 “Changes in the Work”.

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. NJ UNIFORM CONSTRUCTION CODE PERMIT

The project construction documents must comply with the latest adopted edition of the NJ Uniform Construction Code (NJUCC).

The latest NJUCC Adopted Codes and Standards can be found at:

<http://www.state.nj.us/dca/divisions/codes/codreg/>

The Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections with all technical site data required. 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 DPMC Project Manager.

The Consultant may obtain copies of all NJUCC permit applications at the following website:

<http://www.state.nj.us/dca/divisions/codes/forms/>

All other required project permits shall be obtained and paid for by the Consultant in accordance with the procedures described in Paragraph IX.B.

1. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various “prior approvals” as defined by N.J.A.C. 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 N.J.A.C. 7:14B, Pinelands Commission, Highlands Council, Well Construction and Maintenance; Sealing of Abandoned Wells with N.J.A.C. 7:9D, 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 N.J.A.C. 5:23-2.15(a)5, a permit cannot be issued until the letter(s) of certification is received.

2. 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.

3. Special Inspections:

In accordance with the requirements of the New Jersey Uniform Construction Code N.J.A.C. 5:23-2.20(b), Bulletin 03-5 and Chapter 17 of the International Building Code, the Consultant shall be responsible for the coordination of all special inspections during the construction phase of the project.

Bulletin 03-5 can be found at:

http://www.state.nj.us/dca/divisions/codes/publications/pdf_bulletins/b_03_5.pdf

a. Definition:

Special inspections are defined as an independent verification by a certified Special Inspector for **Class I buildings and smoke control systems in any class building**. The special inspector is to be independent from the Contractor and responsible to the Consultant so that there is no possible conflict of interest.

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

b. Responsibilities:

The Consultant shall submit with the permit application, a list of special inspections and the agencies or special inspectors 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.

B. 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.”**

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.

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, with agreement of the Project Team, 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:

<http://www.nj.gov/health/workplacehealthandsafety/peosh/peosh-health-standards/iaq.shtml>

E. PERMIT MEETINGS

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

F. 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”, refer to N.J.A.C. 14:2.

G. CONSULTANT FEE

The Consultant shall determine the efforts required to complete and submit all permit applications, obtain and prepare supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the “Permit Phase”.

X. GENERAL REQUIREMENTS

A. SCOPE CHANGES

The Consultant must request any changes to this Scope of Work in writing. An approved DPMC 9c Consultant Amendment Request form reflecting authorized scope changes must be received by the Consultant prior to undertaking any additional work. The DPMC 9c 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 9c 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: <http://www.njcleanenergy.com> 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.

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 permits, certificates, and approvals required to complete this project.

2. Permit Costs:

The Consultant shall estimate 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**”, refer to Paragraph IX.A. 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 will be paid for by the State.

3. Applications:

The Consultant shall complete and submit all permit applications to the appropriate permitting authorities and the costs shall be paid from the Consultant’s permit fee allowance. A copy of the application(s) and the original permit(s) obtained by the Consultant shall be given to the DPMC 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 will be returned to the State at the close of the project.

B. WATER SUPPLY UPGRADE ALLOWANCE

The Consultant shall estimate the costs associated with the potential requirement to upgrade the building water supply system, including a new fire pump, and enter that amount in their fee proposal line item entitled “**Water Supply Upgrade Allowance**”.

Any funds remaining in the 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 (latest edition), correspondence, calculations, and other appropriate items identified on the Submission Checklist form provided in the A/E Manual shall be presented in an 8½” 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.

PROJECT NAME: New Fire Detection and Suppression System
PROJECT LOCATION: NJDOT South Region Headquarters
PROJECT NO: T0648-00
DATE: May 13, 2021

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.

PROJECT NAME: New Fire Detection and Suppression System
PROJECT LOCATION: NJDOT South Region Headquarters
PROJECT NO: T0648-00
DATE: May 13, 2021

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 APPROVED BY: James W. Wright 5/13/2021
JAMES WRIGHT, MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY: Michael DeAngelo 05.18.21
MICHAEL DEANGELO, MANAGER DATE
DEPARTMENT OF TRANSPORTATION

SOW APPROVED BY: Ronald W Kraemer 05/26/2021
RONALD KRAEMER, PROJECT MANAGER DATE
DPMC PROJECT MANAGEMENT GROUP

SOW APPROVED BY: Richard S Flodman 5/27/2021
RICHARD FLODMAN, DEPUTY DIRECTOR DATE
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.

INVESTIGATION PHASE

- 6.1 Project Schedule (Update Bar Chart Schedule)**
 - 6.2 Meetings & Minutes (Minutes within seven (7) calendar 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: fire protection, etc.
 - 6.4.4 Site Evaluation
 - 6.4.8 Regulatory Agency Approvals
 - 6.4.9 Utility Availability for:
Fire Service
 - 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 6.4.12 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 seven (7) calendar 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 Investigation Phase)
 - 7.4.3 Special Features Description: fire protection, etc.
 - 7.4.4 Site Evaluation
 - 7.4.8 Regulatory Agency Approvals
 - 7.4.9 Confirm Utility Availability (On Site & Public)
 - Fire Service
 - Tank Locations & Sizes
 - 7.4.10 Drawings: 6 sets
 - Cover Sheet (See A/E Manual for format)
 - Site Plan
 - Site Utility Plan
 - Floor Plans
 - Elevations
 - Sections/Details
 - Fire Protection Drawings, Hydraulic Calcs, Water Pressure & Flow Data
 - Electrical Drawings, Riser Diagram, Panel Schedules, Service Size
 - 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 7.4.12 Current Working Estimate/Cost Analysis
- Figure 7.4.16 Submission 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 seven (7) calendar days of meeting)

8.3 Correspondence

8.4 Submission Requirements

- 8.4.1 A/E Statement of Site Visit
- 8.4.2 Space Analysis
- 8.4.3 Special Features Description, Communication/Security/Fire/Smoke/Exhaust)
- 8.4.4 Site Evaluation
- 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
- 8.6.9 Utility Availability Confirmation
- 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

- 9.01 Original Drawings signed & sealed by A/E and drawings on compact disk (CD) in *Adobe Portable Document Format (.pdf)*
- 9.02 One Unbound Specification Color Coded per A/E Manual Section 8.4.11 and specifications on compact disk (CD) in *Adobe Portable Document Format (.pdf)*
- 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(s) of Recommendation for Award & Cost Analysis

9.5 Attend Post Bid Review Meeting(s)

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
- (b) Guarantees
- (c) Testing Reports
- (d) Shop Drawings
- (e) 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 11.2 Project Close-Out Documentation List DPMC 20A
- Figure 11.3-a Certificate of Substantial Completion DPMC 20D
- Figure 11.3-b Final Acceptance of Consultant Contract DPMC 20C
- Figure 11.5 Request for Contract Transition Close-Out DPMC 20X
- Figure 11.7 Final Contract Acceptance Form DPMC 20
- Figure 11.8.3-a Final Cost Analysis
- Figure 11.8.3-b Insurance Transfer Form DPMC 25
- Figure 11.8.4 Submission 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.

<u>CODE</u>	<u>DESCRIPTION</u>	<u>REPORTS TO ASSOCIATE DIRECTOR OF:</u>
CM	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'

Activity ID	Description	Rspn	Weeks
<PROJ>			
Design			
CV3001	Schedule/Conduct Pre-design/Project Kick-Off Mtg.	CM	
CV3020	Prepare Program Phase Submittal	AE	
CV3021	Distribute Program Submittal for Review	CM	
CV3027	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3022	Review & Approve Program Submittal	CA	
CV3023	Review & Approve Program Submittal	PR	
CV3024	Review & Approve Program Submittal	CM	
CV3025	Consolidate & Return Program Submittal Comments	CM	
CV3030	Prepare Schematic Phase Submittal	AE	
CV3031	Distribute Schematic Submittal for Review	CM	
CV3037	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3032	Review & Approve Schematic Submittal	CA	
CV3033	Review & Approve Schematic Submittal	PR	
CV3034	Review & Approve Schematic Submittal	CM	
CV3035	Consolidate & Return Schematic Submittal Comment	CM	
CV3040	Prepare Design Development Phase Submittal	AE	
CV3041	Distribute D. D. Submittal for Review	CM	
CV3047	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3042	Review & Approve Design Development Submittal	CA	
CV3043	Review & Approve Design Development Submittal	PR	
CV3044	Review & Approve Design Development Submittal	CM	
CV3045	Consolidate & Return D.D. Submittal Comments	CM	
CV3050	Prepare Final Design Phase Submittal	AE	
CV3051	Distribute Final Design Submittal for Review	CM	
CV3052	Review & Approve Final Design Submittal	CA	
CV3053	Review & Approve Final Design Submittal	PR	
CV3054	Review Final Design Submit for Constructability	OCS	

Sheet 1 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit "A"

DBCA - TEST

NOTE:
Refer to section "IV Project Schedule" of the
Scope of Work for contract phase durations.

© Primavera Systems, Inc.

Activity ID	Description	Respn	Weeks
CV6014	Roughing Work Complete	CON	
CV6021	Interior Finishes Start	CON	
CV6022	Install Interior Finishes	CON	
CV6030	Contract Work to Substantial Completion	CON	
CV6031	Substantial Completion Declared	CM	
CV6075	Complete Deferred Punch List/Seasonal Activities	CON	
CV6079	Project Construction Complete	CM	
CV6080	Close Out Construction Contracts	CM	
CV6089	Construction Contracts Complete	CM	
CV6090	Close Out A/E Contract	CM	
CV6092	Project Completion Declared	CM	

DBCA - TEST

Sheet 3 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit 'A'

NOTE:
Refer to section "IV Project Schedule" of the
Scope of Work for contract phase durations.

© Primavera Systems, Inc.



NJ Department of Transportation
South Region Headquarters
Location Map
EXHIBIT 'B'



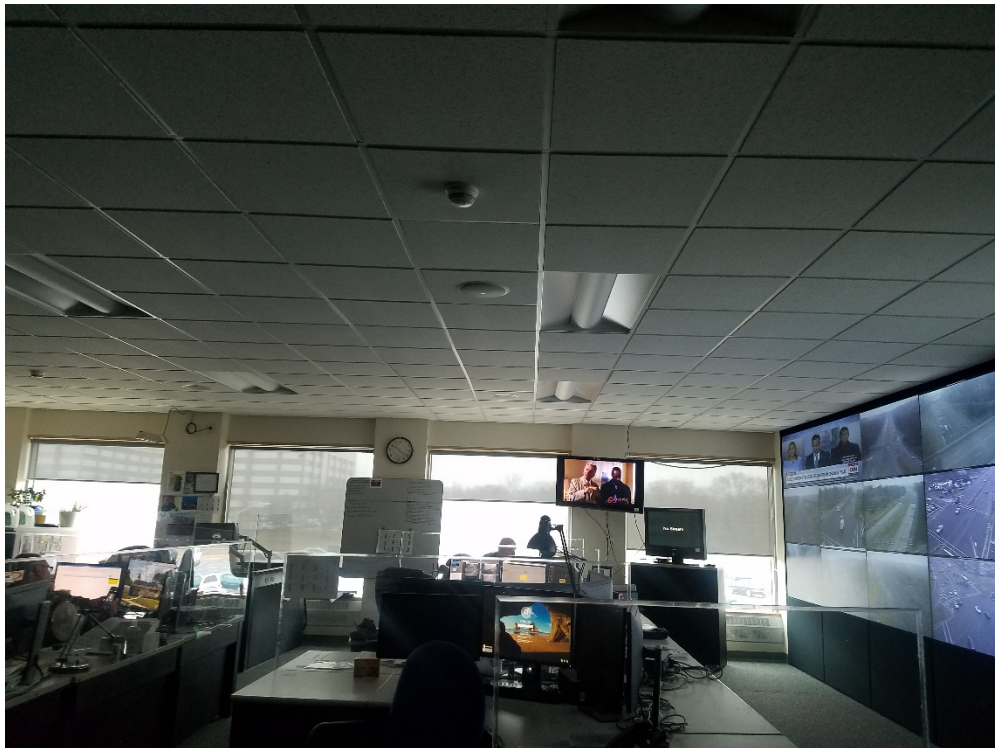
Existing Fire Water Entrance into the Building.
EXHIBIT 'C'



Sprinkler Equipment Room
EXHIBIT 'C'



Fire Valve Cabinet (Typical)
EXHIBIT 'C'



Traffic Operations and Data Center on second floor.

EXHIBIT 'C'



CHERRY HILL FIRE DEPARTMENT

Annual Private Fire Hydrant Inspection Form

(Please complete one form per hydrant)

Property Name or Address: 3 Executive Campus Suite 130 Cherry Hill NJ

Testing Agency Name: Advantage Fire Protection

Inspector: Ira Tomeo

Hydrant Location: Front of the Building

Date: 5-8-2020

	<u>Yes</u>	<u>No</u>
Hydrant Accessible	<u>X</u>	___
No Obvious Leaks	<u>X</u>	___
No obvious damage	<u>X</u>	___
Adequate vehicle protection (parking areas)	<u>X</u>	___
Caps are easy to remove	<u>X</u>	___
Threads on outlets free of damage and lubricated during inspection	<u>X</u>	___
Stem operates smoothly	<u>X</u>	___
Hydrant fully opened during inspection	<u>X</u>	___
Adequate flow (visual inspection)	<u>X</u>	___
Hydrant adequately drains after closing	<u>X</u>	___

Please explain deficiencies:

*****Static 100PSI, Res. 75 PSI, Nozzle 2 1/2 inch, Pitot 40, GPM 1060

Cherry Hill Fire Prevention Division
1100 Marlkrass Road
Cherry Hill, NJ 08003
P 856-795-1340 / F 856-795-8432

EXHIBIT 'D'



CHERRY HILL FIRE DEPARTMENT

Annual Private Fire Hydrant Inspection Form (Please complete one form per hydrant)

Property Name or Address: 3 Executive Campus Suite 130 Cherry Hill NJ

Testing Agency Name: Advantage Fire Protection

Inspector: Ira Tomeo

Hydrant Location: Rear of the Building

Date: 5-8-2020

	<u>Yes</u>	<u>No</u>
Hydrant Accessible	<u>X</u>	___
No Obvious Leaks	<u>X</u>	___
No obvious damage	<u>X</u>	___
Adequate vehicle protection (parking areas)	<u>X</u>	___
Caps are easy to remove	<u>X</u>	___
Threads on outlets free of damage and lubricated during inspection	<u>X</u>	___
Stem operates smoothly	<u>X</u>	___
Hydrant fully opened during inspection	<u>X</u>	___
Adequate flow (visual inspection)	<u>X</u>	___
Hydrant adequately drains after closing	<u>X</u>	___

Please explain deficiencies:

*****Static 100PSI, Res. 80 PSI, Nozzle 2 1/2 inch, Pitot 30, GPM 920

Cherry Hill Fire Prevention Division
1100 Markkress Road
Cherry Hill, NJ 08003
P 856-795-1340 / F 856-795-8432

EXHIBIT 'D'