

# **SCOPE OF WORK**

## **Roof Replacement**

Department of State Building  
Trenton, Mercer County, N.J.

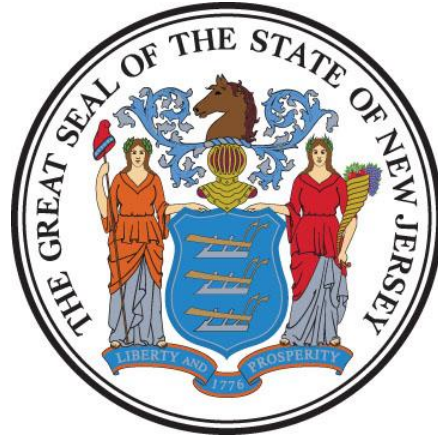
**Project No. A1355-00**

## **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: October 28, 2021**

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## **I. OBJECTIVE**

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The objective of this project is to remove and replace the existing roof system, including the repair/replacement of the marble wall panels on the parapet wall, at the Department of State Building in Trenton, New Jersey.

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## **II. CONSULTANT QUALIFICATIONS**

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### **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):

- **P035 Roofing Consultant**

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

- **P028 Roof Inspection**
- **P025 Estimating/ Cost Analysis**
- **P037 Asbestos Design**
- **P038 Asbestos Safety Control Monitoring**
- **P065 Lead Paint Evaluation/ Inspection**

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).

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## **III. PROJECT BUDGET**

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### **A. CONSTRUCTION COST ESTIMATE (CCE)**

The initial Construction Cost Estimate (CCE) for this project is \$1,062,075.00

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

### **B. CURRENT WORKING ESTIMATE (CWE)**

The Current Working Estimate (CWE) for this project is \$1,325,886.00

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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.

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## **IV. PROJECT SCHEDULE**

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### **A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE**

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

<b>PROJECT PHASE</b>	<b>ESTIMATED DURATION (Calendar Days)</b>
<b>1. Site Access Approvals &amp; Schedule Design Kick-off Meeting</b>	<b>14</b>
<b>2. Design Development Phase</b> <b>50% (Minimum)</b>	<b>42</b>
• <i>Project Team &amp; DPMC Plan/Code Unit Review &amp; Comment</i>	14
<b>3. Final Design Phase</b> <b>100%</b>	<b>42</b>
• <i>Project Team &amp; DPMC Plan/Code Unit Review &amp; Approval</i>	14
<b>4. Final Design Re-Submission to Address Comments</b>	<b>7</b>
• <i>Project Team &amp; DPMC Plan/Code Unit Review &amp; Approval</i>	14
<b>5. Permit Application Phase</b>	<b>7</b>
• <i>Issue Plan Release</i>	
<b>6. Bid Phase</b>	<b>42</b>
<b>7. Award Phase</b>	<b>28</b>
<b>8. Construction Phase</b>	<b>90</b>

## **B. CONSULTANT’S PROPOSED DESIGN & CONSTRUCTION SCHEDULE**

The Consultant shall submit a project design and construction bar chart schedule with its 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 its 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 its 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).

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## **V. PROJECT SITE LOCATION & TEAM MEMBERS**

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### **A. PROJECT SITE ADDRESS**

The location of the project site is:

**Department of State Building**  
225 West State Street  
Trenton, New Jersey 08608

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: Grant Butts, Project Manager  
Address: Division Property Management & Construction  
20 West State Street, 3<sup>rd</sup> Floor  
Trenton, NJ 08608-1206  
Phone No: (609) 218-0326  
E-Mail No: grant.butts@treas.nj.gov

### **2. Department of Treasury:**

Name: Mark Dae, Chief, Property Management  
Address: Division Property Management & Construction  
20 West State Street, 3<sup>rd</sup> Floor  
Trenton, NJ 08625  
Phone No: (609) 984-9711  
E-Mail No: Mark.Dae@treas.nj.gov

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## **VI. PROJECT DEFINITION**

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### **A. BACKGROUND**

The Department of State Building is located at 225 West State Street in Trenton, formerly known as the Department of Education Building. It was originally constructed in 1961 and in 1993 underwent a complete interior renovation that included asbestos removal, new interior finishes and new mechanical systems. Some exterior waterproofing and sealant repair were done in 2013. The NJ Governor and staff currently occupy the building while the Executive State House undergoes renovation. See **Exhibit 'B'** for the site location.

### **B. FUNCTIONAL DESCRIPTION OF THE BUILDING**

#### **1. Existing Building Description:**

The Department of State Building is a five-story structure, which includes a lower level and a penthouse. The basement level where archives are stored has a larger footprint than the floors above and extends under stone, ballasted planters.

## **2. Existing Roof Description:**

The existing roof consists of six (6) areas, identified with letters A, B, B1, C, D and E as shown on the roof diagram shown in **Exhibit ‘C’**. The current roof systems are between twenty and thirty years old. The building Roof Areas A & C are coal-tar pitch built-up roof systems and are approximately 30 or more years old. Roof Areas B and B1 incorporate a white granulated modified bitumen roof system and Roof Areas D and E incorporate a ballasted EPDM roof system. These roofs are beyond twenty years old. In addition, the marble wall panels, covering the EPDM membrane on the parapet wall, are splitting and splits were covered by maintenance personnel to possibly stop leaks, see photos in **Exhibit ‘D’**.

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# **VII. CONSULTANT DESIGN RESPONSIBILITIES**

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## **A. NEW ROOF DESIGN REQUIREMENTS**

### **1. General:**

The Consultant shall review the Roof Evaluation Report for the replacement of the existing Roof System, at the Department of the State Building, prepared by ARMM Architecture Associates, INC., (see **Exhibit ‘D’**) and provide the Design, Construction Administration, Permitting and Bid/Award services to replace the existing roof on the Department of State Building. It is recommended that a built-up roof be provided. Although the initial cost is greater, DPMC has found the performance and longevity of a built-up roof to be superior to that of EPDM, which over time results in a more cost efficient roof system. An EPDM roof, if used, shall be reinforced and fully adhered. In addition, the repair/replacement of the marble wall panels on the parapet wall shall be part of this project’s scope of work.

### **2. Life Cycle Cost Analysis:**

The Consultant shall conduct a Life Cycle Cost Analysis comparing the various roofing systems that are applicable to the building type for this project. Provide a matrix that compares the criteria analyzed in order to evaluate and recommend the appropriate roofing system to the Project Team. Note that the names of three equal roofing system manufacturers must be listed in the design documents. Items to review shall include, but not be limited to life expectancy of the roofing systems, available warranties and their costs, Material and installation costs, annual maintenance costs, the latest adopted edition of ASHRAE 90.1 Energy Standards, and estimated energy savings.

### **3. New Roof System:**

Provide a new roofing system including the marble wall panels on the parapet wall and all related components based on the Project Team’s approval of the Life Cycle Cost Analysis.

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The design documents shall address the roof manufacturer's installation criteria, occupancy of the building, access to the building roof and security issues, approved storage methods of the roofing materials, etc.

The manufacturer of the roofing system shall have no less than five (5) years successful experience in producing the materials required for this project. Membrane, flashing, and adhesive shall be the single product of a standard manufacturer.

The roofing system shall be in accordance with the latest adopted edition of ASHRAE 90.1 Energy Standards.

The roofing system shall be in compliance with the "Factory Mutual Research Corp" (FMRC) standards and must meet all requirements of Factory Mutual I-90 classification for wind uplift.

The Contractor shall supply only a U.L. Class "A" fire rated roofing system.

If the roofing system and/or related components are not a replacement in kind, then the Consultant shall submit a signed and sealed calculations to the DPMC Design and Code Review Unit Manager verifying that the existing roof structure can support all loads of the new roofing system and components per current code requirements.

#### **4. Roof System Removal:**

The existing roof system, insulation, flashings, and related trims shall be completely removed to the original decking and legally disposed. The removal of the existing roof system shall be coordinated with the installation of the new roof to prevent exposure to weather conditions and potential water infiltration into the building.

Design documents shall identify all requirements for safety devices, need for chutes and/or cranes for roof material removal, dumpster location, protection from exposure to the weather, protection of property and personnel, building access routes and circulation patterns, contractor use of the premises, parking, security procedures, equipment and materials storage, waste disposal, etc.

#### **5. Caulking & Joint Sealant:**

All appropriate roof deck joint sealants shall be removed and replaced with high performance sealant as part of the roof system. The design shall include the cleaning, priming, and installation of new sealants with new backer rods and bond breakers.

Examine and measure all exterior joints and calculate the required joint width(s). Design for widening joints as required.

Observe the installation of the sealant joints, performing pull tests for cohesion and adhesion on a random sampling of each joint type.

Specify that the sealant manufacturer must provide a warranty for a minimum of twenty (20) years for any repairs to maintain joints in a leak free condition and at no cost to the State.

#### **6. Insulation:**

Recommend new high-density rigid insulation boards that comply with current energy code requirements. Ensure the roofing system manufacturer approves the method of fastening the insulation board to the roof deck system.

DPMC does not permit Urethane material insulation due to a history of gas release and bubbling under the roofing ply layer(s).

#### **7. Walkways:**

Provide new walkway protection from access points to and around all roof mounted HVAC units and/or other similar equipment requiring periodic servicing and any other trafficking areas.

#### **8. Night Seals:**

The Contractor, having begun work on a roof section, should make every effort to finish roofing that section before the end of the day. However, the Consultant shall specify in the design documents that the Contractor shall install temporary water tight night seals around all exposed edges of the roofing assembly at the end of each work day, as necessary, and when work must be postponed due to inclement weather.

#### **9. Roof Drains:**

All drains, where repair takes place, shall be removed and reset or repositioned so that the drain is below the roof membrane surface. Provide for repair, replacement and additional drains as required. The client shall test and repair any interior lines below the flange.

#### **10. Fire Protection Program:**

Address fire protection requirements during the demolition and installation of the roofing system. Language shall be included that states open flames such as propane torches, kettles, flame cutting, and welding cannot be used on the construction site until a fire watch program has been submitted by the Contractor and approved by the Consultant and Project Team members.

### **11. Flashing:**

All rooftop pipe supports, pipe vents, and other roof penetrations must have new flashing installed as part of this project. All pipe flashings are to be pre-molded and provided with stainless steel pipe clamps at each penetration.

### **12. Construction Canopy:**

Investigate the need for a temporary canopy that will prevent roofing materials, construction tools and equipment, dirt and debris, solvents, sealants, bonding adhesives, etc. from injuring personnel using the public access areas and emergency egress paths must be kept clear throughout demolition and construction activities.

## **B. ROOF MONITOR:**

The Consultant shall provide a full time roof monitor during the installation of the roof system on the building. Refer to Section VIII., Chapter O., in this scope of work, for Roof Monitor Responsibilities.

The Consultant shall have in-house capabilities or a Sub-Consultant pre-qualified with DPMC in the P028 Roofing Inspection Specialty Discipline. The costs for the services provided by the roof monitor shall be included in their fee proposal line item entitled “**Roof Monitor Allowance**”, refer to paragraph XI.B.

## **C. HAZARDOUS BUILDING MATERIALS**

Consultant shall survey the building(s) and, if deemed necessary, collect samples of materials that will be impacted by the construction/demolition activities and analyze them for the presence of hazardous materials including:

1. Asbestos in accordance with N.J.A.C. 5:23-8, Asbestos Hazard Abatement Sub code.
2. Lead in accordance with N.J.A.C. 5:17, Lead Hazard Evaluation and Abatement Code.
3. PCB’s in accordance with 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions. Consultant shall engage a firm certified in the testing and analysis of materials containing PCB’s.

The Consultant shall engage the services of a Sub-Consultant, pre-qualified with DPMC in the P065 Lead Paint Evaluation/Inspection Specialty Discipline to produce a design document that stipulates construction safety procedures that adhere to applicable Federal and State regulations and that shall be incorporated into the project design documents.

A formal lead abatement shall not be conducted. Rather, the design document shall deal only with proposed lead base paint as may be encountered in areas of the building that will be affected by the construction of this project. It is intended that the construction Contractor for the project shall be responsible for any and all air or swab sampling during construction as may be required by law. The Sub-Consultant shall supervise said activity and sampling.

Consultant shall document their procedure, process and findings and prepare a “Hazardous Materials Survey Report” identifying building components impacted by construction activities requiring hazardous materials abatement. Consultant shall provide three copies of the “Hazardous Materials Survey Report” to the Project Manager.

Consultant shall estimate the cost of hazardous materials sample collection, testing, analysis and preparation of the Hazardous Materials Survey Report and include that amount in their fee proposal line item entitled “**Hazardous Materials Testing and Report Allowance**”, refer to paragraph XI.C.

Based on the Hazardous Materials Survey Report, Consultant shall provide construction documents for abatement of the hazardous materials impacted by the work in accordance with the applicable code, sub code and Federal regulations.

Consultant shall estimate the cost to prepare construction documents for hazardous materials abatement and include that amount in their fee proposal line item entitled “**Hazardous Materials Abatement Design Allowance**”, refer to paragraph XI.D.

Consultant shall estimate the cost to provide “Construction Monitoring and Administration Services” for hazardous materials abatement activities and include that amount in their fee proposal line item entitled “**Hazardous Materials Construction Administration Allowance**”, refer to paragraph XI.E.

There shall be no “mark-up” of sub-consultant or subcontractor fees if sub-consultants or subcontractors are engaged to perform any of the work defined in paragraph VII.F “Hazardous Building Materials”. All costs associated with managing, coordinating, observing and administrating sub-consultants and subcontractors performing hazardous materials sampling, testing, analysis, report preparation, hazardous materials construction administration services shall be included in the consultant’s lump sum fee proposal.

## **D. 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](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.

## **E. 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.

- **DBC Project # A0716-00:** Renovations to the Department of State Building, CUH2A Architecture, Engineering, Planning, Record Set 1997.

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.

### **F. 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.

**G. 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:

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

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

## **H. 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)*.

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# **VIII. CONSULTANT CONSTRUCTION RESPONSIBILITIES**

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## **A. GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW**

This section of the Scope of Work is intended as a guide for the Consultant to understand its 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 its 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 its 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 the 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 its 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 its 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) working 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 its 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 its 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 its technical proposal so that 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 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 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 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 its 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 its 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 its 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.

**O. ROOF MONITOR RESPONSIBILITIES**

The Consultant shall provide a full time roof monitor during the installation of the roof system on the building. The responsibilities of the roof monitor shall include, but not be limited to the following items:

**1. Roof Monitor Inspections:**

The Roof Monitor must continuously inspect and monitor the Contractor's work on site and file a daily DPMC 605 Roofing Inspector's Check List Form to ensure compliance with the contract documents. Photographs shall be included for reference. The report shall include weather conditions, number of workers, and the amount of roof removed and installed together with comments on each phase of work. Comments shall provide descriptions and information on project mobilization, material delivery, removal of existing roof system, preparation of the existing deck, installation of the new underlayment and/or insulation, sealant and adhesive applications, flashing, etc.

**2. Inclement Weather:**

The Consultant, in conjunction with the Roof Monitor, shall anticipate time losses due to seasonal inclement weather conditions such as rain, wind and low ambient temperatures and include these hours in the base bid of the fee proposal.

On the first day of inclement weather, the Roof Monitor will be entitled to four hours to visit the site and inspect the roofing system for potential roof leaks or damage. Additional time spent on the site during inclement weather will not be reimbursed unless directed by the Project Manager.

**3. Unsatisfactory Work:**

If the Roof Monitor determines that the roof Contractor is installing the roofing system improperly, he shall notify the Contractor to stop all work until the Consultant is notified and inspects the work for design conformity. If appropriate, provisions shall be made to seal the roof work area until the Consultant arrives and the installation issues are resolved.

If the Consultant determines that the installation does not meet the intentions of the design or indicates poor workmanship, he shall notify the Project Manager that he recommends the questionable roofing installation be removed and replaced properly. The Project Manager shall then notify the Contractor verbally to take the recommended action and shall follow up with a written directive indicating the time and date the Contractor was notified.

**4. Meetings:**

The Consultant and Roof Monitor shall both attend the pre-construction conference and all periodic job progress meetings during the construction phase of the project.

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**IX. PERMITS & APPROVALS**

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**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](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**

If requested by the using agency or DPMC design management, plans and specifications shall be submitted to the State insurance underwriter for review and comment. The plans shall be sent directly by the consultant and a copy of the comments, if any, shall be provided to the DPMC Plan & Code Review Unit for its information. 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 its fee proposal under the “Permit Phase”.

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**X. GENERAL REQUIREMENTS**

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**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

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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 its fee proposal.

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# **XI. ALLOWANCES**

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## **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 its 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 its 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. ROOF MONITOR ALLOWANCE**

The Consultant shall provide a full time roof monitor pre-qualified with DPMC in the P028 Roofing Inspection Specialty Discipline during the installation of the roof system on the building. See section VIII, paragraph O of this Scope of Work for a description of services to be provided by a roof monitor.

The costs for the services provided by the roof monitor shall be included in the “**Roof Monitor Allowance**” of their fee proposal. A cost breakdown sheet shall accompany the fee proposal that identifies all costs associated with the Roof Monitoring services to be provided.

Any funds remaining in the Allowance shall be returned to the State at the end of the project.

## **C. HAZARDOUS MATERIALS TESTING AND REPORT ALLOWANCE**

Consultant shall estimate the costs to complete the hazardous materials survey, sample collection, testing and analysis and preparation of a “Hazardous Materials Survey Report” noted in paragraph VII.F and enter that amount on their fee proposal line item entitled “**Hazardous Materials Testing and Report Allowance**”. Consultant shall attach a detailed cost breakdown

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sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include, but not be limited to, the following information:

- Description of tasks and estimated cost for the following:
  - Sample collection
  - Sample testing
  - Preparation of a Hazardous Materials Survey Report

Any funds remaining in the Hazardous Materials Testing and Report Allowance will be returned to the State at the close of the project.

#### **D. HAZARDOUS MATERIALS ABATEMENT DESIGN ALLOWANCE**

Consultant shall estimate the costs to prepare construction documents for hazardous materials abatement noted in paragraph VII.F and enter that amount on their fee proposal line item entitled “**Hazardous Materials Abatement Design Allowance**”. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Abatement Design Allowance will be returned to the State at the close of the project.

#### **E. HAZARDOUS MATERIALS CONSTRUCTION ADMINISTRATION ALLOWANCE**

Consultant shall estimate the cost to provide Construction Monitoring and Administration Services for hazardous materials abatement as noted in paragraph VII.F and enter that amount on their fee proposal line item entitled “**Hazardous Materials Construction Administration Allowance**”. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Construction Administration Allowance will be returned to the State at the close of the project.

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## **XII. SUBMITTAL REQUIREMENTS**

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### **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.

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## **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.

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: Roof Replacement**  
**PROJECT LOCATION: Department of State Building**  
**PROJECT NO: A1355-00**  
**DATE: October 28, 2021**

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### **XIII. SOW SIGNATURE APPROVAL SHEET**

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

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

**SOW PREPARED BY:**  10/28/2021  
DOAA ABOUELELA, PROJECT MANAGER DATE  
DPMC PROJECT PLANNING & INITIATION

**SOW APPROVED BY:**  10/28/2021  
JAMES WRIGHT, MANAGER DATE  
DPMC PROJECT PLANNING & INITIATION

**SOW APPROVED BY:**  11-05-21  
MARK DAE, CHIEF PROPERTY MANAGEMENT DATE  
CLIENT AGENCY REPRESENTATIVE

**SOW APPROVED BY:**  11/5/2021  
GRANT BUTTS, PROJECT MANAGER DATE  
DPMC PROJECT MANAGEMENT GROUP

**SOW APPROVED BY:**  11/10/21  
RICHARD FLODMAND, DEPUTY DIRECTOR DATE  
DIV PROPERTY MGT & CONSTRUCTION

## **XIV. CONTRACT DELIVERABLES**

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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, 2<sup>nd</sup> 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.

### **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
  - 7.4.3 Special Features Description: special structural features, etc.
  - 7.4.4 Site Evaluation
  - 7.4.7 Design Rendering/Sketches
  - 7.4.8 Regulatory Agency Approvals (See Section 6.4.8 for listing)
  - 7.4.10 Drawings: 6 sets
    - Cover Sheet (See A/E Manual for format)
    - Roof Plan
    - Elevations
    - Sections/Details
  - 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: special structural features, etc.

8.4.4 Site Evaluation

8.4.5 Borings, Surveys, Soils Analysis (provided with plan submission)

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 3 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**

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## **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) Shop Drawings
  - (d) 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

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**XV. EXHIBITS**

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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**

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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
<b>&lt;PROJ&gt;</b>			
<b>Design</b>			
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	

DBCA - TEST

Sheet 1 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.

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Activity ID	Description	Respn	Weeks
CV2055	Review & Approve Final Design Submittal	CM	
CV2056	Consolidate & Return Final Design Comments	CM	
CV3060	Prepare & Submit Permit Application Documents	AE	
CV3068	Prepare & Submit Bidding Cost Analysis (DPMC-38)	CM	
<b>Plan Review-Permit Acquisition</b>			
CV4001	Review Constr. Documents & Secure UCC Permit	PR	
CV4010	Provide Funding for Construction Contracts	CA	
CV4020	Secure Bid Clearance	CM	
<b>Advertise-Bid-Award</b>			
CV5001	Advertise Project & Bid Construction Contracts	CP	
CV5010	Open Construction Bids	CP	
CV5011	Evaluate Bids & Prep. Recommendation for Award	CM	
CV5012	Evaluate Bids & Prep. Recommendation for Award	AE	
CV5014	Complete Recommendation for Award	CP	
CV5020	Award Construction Contracts/Issue NTP	CP	
<b>Construction</b>			
CV6000	Project Construction Start/Issue NTP	CM	
CV6001	Contract Start/Contract Work (25%) Complete	CON	
CV6002	Preconstruction Meeting	CM	
CV6003	Begin Preconstruction Submittals	CON	
CV6004	Longest Lead Procurement Item Ordered	CON	
CV6005	Lead Time for Longest Lead Procurement Item	CON	
CV6006	Prepare & Submit Shop Drawings	CON	
CV6007	Complete Construction Submittals	CON	
CV6011	Roughing Work Start	CON	
CV6012	Perform Roughing Work	CON	
CV6010	Contract Work (50%+) Complete	CON	
CV6013	Longest Lead Procurement Item Delivered	CON	
CV6020	Contract Work (75%) Complete	CON	

Sheet 2 of 3

**Bureau of Design & Construction Services**  
Routine Project

**Exhibit 'A'**

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DRCA - TEST

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

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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.

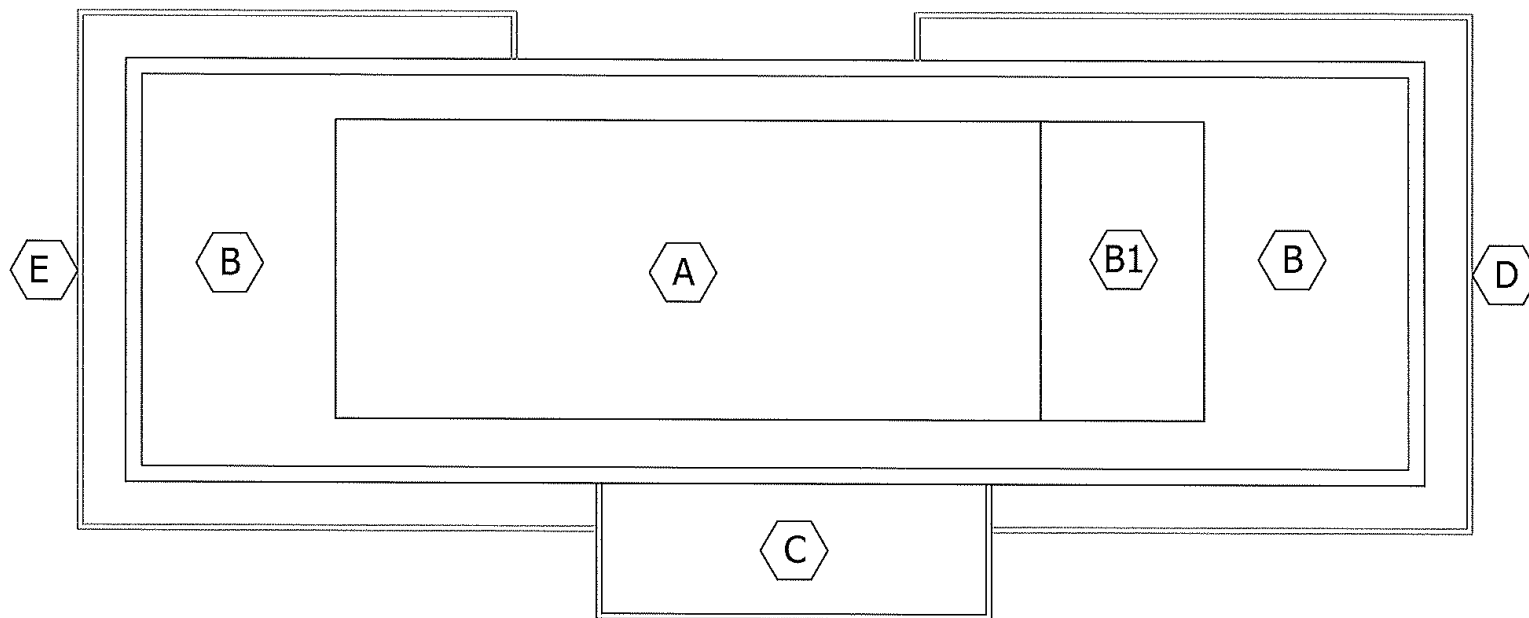
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Project Site Location Map

**EXHIBIT 'B'**

STATE OF NEW JERSEY OFFICE BUILDING  
225 W. STATE STREET  
TRENTON, NEW JERSEY



ROOF AREA  
SQUARE FOOTAGE

- |      |                |     |                 |
|------|----------------|-----|-----------------|
| ⬡ A  | ±5,700 SQ. FT. | ⬡ B | ±10,645 SQ. FT. |
| ⬡ B1 | ±1,345 SQ. FT. | ⬡ C | ±2,700 SQ. FT.  |
| ⬡ D  | ±2,465 SQ. FT. | ⬡ E | ±2,135 SQ. FT.  |

APPROX. TOTAL ROOF AREA  
±24,990 SQ. FT.

ROOF PLAN  
SCALE: NOT TO SCALE



ARMM ASSOCIATES, INC.

725 Kenilworth Ave. • Cherry Hill, NJ 08002-2829  
Phone 856-665-8484 • Fax 856-665-5255

DEPT OF STATE BLDG. ROOF DIAGRAM  
**EXHIBIT 'C'**



# ARMM ARCHITECTURE ASSOCIATES, INC.

725 Kenilworth Avenue • Cherry Hill, NJ 08002-2841  
(800)257-5261 • (856)665-8484 • Fax (856)665-5255

March 26, 2021

**VIA EMAIL [Mark.Dae@treas.nj.gov](mailto:Mark.Dae@treas.nj.gov)**

Mark Dae  
State of NJ, Department of Treasury  
Division of Property Management and Construction  
PO Box 235  
Trenton, NJ

**Re: Roof Evaluation 225 West State Street, Trenton, NJ**

Dear Mr. Dae:

Pursuant to your request, on Thursday, March 25, 2021, a visit was made to 225 W State Street by ARMM's senior roof investigator and field technician, John Hillman, to provide factual information to the State of NJ as to the following:

1. Existing condition of the roof systems in place over the facility.
2. Problem areas of the roof systems and required repairs and/or maintenance.
3. Recommendations for repair and/or replacement for each roof area.
4. Priority listing and budget cost for repairs and/or replacement.

ARMM has provided a CAD generated roof plan, which is located on page 5, identifying the location of each roof area. In addition, as part of this report a CAD generated Photograph Location Plan (page 6), identifies exactly where each photograph was taken. Captioned field observation photographs for each roof area starts on page 7 of this report.

At 9:00AM Mr. Hillman met with Jennifer Crowell who provided authorization for security clearance to enter the building. Maintenance personnel, Joe Payer, accompanied Mr. Hillman and provided access to the roof areas and information concerning each roof section.

The building incorporates six (6) roof areas which ARMM has identified with letters A, B, B1, C, D and E as shown on the roof plan located on page 5 of this report.

As per the information provided to ARMM, the current roof systems are between twenty (20) and thirty (30) years old. Based on our review of the existing roof composition, it can reasonably be assumed that the building Roof Areas A and C are compromised of a coal-tar pitch built-up roof system and are approximately 30 or more years old. Coal-tar pitch roof systems are self sealing systems that have been known to last an average of approximately twenty-five (25) years; with some reportedly lasting fifty (50) years, when properly maintained.

Roof Area B and B1 incorporate a white granulated modified bitumen roof system and Roof Areas D and E incorporate a ballasted EPDM roof system. Both have an expected life of twenty (20) years. Based on conversations with Joe Payer, these roofs are beyond twenty (20) years old.

For clarity purposes, ARMM will discuss each roof area separately as follows:

**Roof Area A:**

Roof Area A is a coal-tar pitch roof system with an aggregate surface and is approximately **5,700 square feet** in size. Based on the information provided to ARMM there have been no issues or leaks with this roof. After ARMM's inspection, it was mentioned to Joe Payer that on the northwest corners of the roof there have been evidence of previous repairs. The repairs were noted to have been performed in a good workmanlike manner and are showing no evidence of problems. Mr. Payer believed that those repairs were made approximately five (5) years ago. Based on my visual inspection there is some minor blistering that is occurring. Blisters are raised surfaces that occur in areas where there is a loss of adhesion between the layers. Generally, the root cause of blisters can be attributed to trapped air or water within built-up roofing system. Overtime, the aggregate, which protects the top membrane ply of the roof system from the elements, erodes off the blistered area. A closer inspection of these raised blisters showed the top bitumen coating was missing and the membrane is exposed to the elements. At one (1) blister location, the membrane lap seam is exposed; at this area a closer examination revealed that the seam is delaminating (see photograph above) and opened. Eventually all the blisters found on this area, as well as adjacent roof areas, will split and create an interior leaks.



**Roof Areas B and B1:**

Areas B and B1 are comprised of a white granular surfaced modified bitumen roof system with a life expectancy of +/- twenty (20) years. Area B is approximately 10,645 square feet and Area B1 is +/- 1,345 square feet (**11,990 total square feet**). Reportedly the roof systems over these two (2) areas are more than twenty (20) years old. Our examination of this roof area noted **numerous** blisters throughout and dozens of previous repair attempts to stop leaks. As stated, these areas are in excess of twenty (20) years old and have already become problematic and costly to repair. Recent leaks have been reported below Roof Area B and are being addressed by building personnel and a roofing contractor, Patriot Roofing.

**Roof Area C:**

There was no access to this roof area, Joe Payer directed ARMM's inspector to an office whereby he could visually inspect the roof. John Hillman stated to Mr. Payer that, in order to render an opinion, a more thorough inspection would be required, which would require a second inspection with a ladder. ARMM revisited the site on Friday, March 26, 2021 to gain access to this section. Recent leaks have been reported below Roof Area C; which are being repaired by building personnel and roofing contractors as they develop.

Approximately more than half of this roof area has already been repaired; and based on the reported age (+30 years) it would not be cost effective to continue with repairs. Roof Area C totals approximately **2,700 square feet** and should be removed and replaced at this time.

**Roof Areas D and E:**

Areas D and E are at ground level and extend from both sides of the front steps around each end to the back of the building. Area D is approximately 2,465 square feet and Area E totals +/- 2,135 square feet; which when combined equates to a **total area of 4,600**. These areas incorporate a ballasted EPDM roofing membrane system. A ballasted membrane system is comprised of large stones weighing down the loose-laid EPDM (rubber) membrane over previously installed insulation board(s). Reportedly, there was a leak at a drain location that had been repaired approximately two (2) years ago. To actually inspect the condition of the EPDM membrane, the stone ballast would have to be removed and after the inspection reinstall throughout. Because the roof is over twenty (20) years old with reported leaks that require immediate repairs, it can reasonably be assumed that this roof has reached its life expectancy. Roof Areas D and E should be replaced at the same time.

In addition, the marble wall panels on the parapet wall and along the base of the building are splitting. Duct tape was provided to cover the splits by maintenance personnel to possibly stop leak(s). During our inspection, there was not an active leak report in this area (marble panels). It appears that the marble wall panels were installed *after* the roof installation. The EPDM membrane base flashing on both the parapet wall and building wall was covered by the marble panels. The distance between the roof surface and the bottom of the panels is approximately 3”.

**Conclusions:**

Roof Areas B, B1 and C have reached their life expectancy whereby repairs are no longer cost effective. The roof areas are degraded and deteriorated at this time. These roof areas should be removed and replaced as soon as funding is available.

The State of NJ may be able to obtain another three (3) to five (5) years of serviceable life, with repairs as needed, on Roof Areas A, D and E. However, based on their age, it may be cost effective to replace in conjunction with Areas B, B1 and C in lieu of waiting for another three (3) to five (5) years as construction costs for labor and materials increase each year.

With respect to Roof Areas D and E, to properly install a new roof system, the existing marble may have to be cut out to provide a minimum base flashing height of 8”; which is standard in all roofing systems. There are alternatives such as liquid membrane flashing system, which manufacturers will cover for the duration of the warranty; however, they prefer the use of a standard base flashing (8”) up the wall. Because of the splits in the marble, the State of NJ may want to consider removing the panels all together with new panels installed after the roof system is in place.

**Budget Costs:**

As stated above, **Roof Areas B, B1 and C** should be totally removed and replaced as soon as funds are available. The following charts represent construction costs in the fall of 2021 and spring of 2022. Please note that COVID had a direct impact on construction costs. Metal, fasteners and plywood have almost quadrupled in costs. My estimates below represent these increases.

As stated herein, the State of NJ could realize another three (3) to five (5) years of serviceable life on **Roof Areas A, D and E**. It is difficult, however, to ascertain construction costs that far into the future. Please note, that it has been our experience that construction costs increase approximately 8% to 10% each year.

**NOTE:** The following construction costs include the total removal of existing roof systems down to the surface of the deck substrates. The new roof system would include a vapor barrier over concrete deck

roof areas, tapered and flat insulation to reach a MINIMUM R-value of 30, 1/2” thick DensDeck Prime cover-board and a fully adhered 60 mil EPDM membrane qualifying for the manufacturers 20 year warranty.

As noted within the above chart, ARMM estimates that construction costs in the fall of 2021 would be in the magnitude of **\$42.50 per square foot**. If the State elects to wait three (3) years for the replacement of Areas A, D and E, they could be looking at a **per square foot** cost in 2024 of **\$53.55** versus \$42.50 in 2021.

In ARMM’s opinion, it would not only be cost effective to replace Areas A, D and E in conjunction with B, B1 and C in the Fall of 2021 (or Spring of 2022) but, more importantly, awarding all roof areas at the same time will provide a single total system warranty by the same manufacturer at all roof areas in lieu of sectionalized replacement, with different contractors, and separate manufacturers.

Here again, it is important to note that COVID created an impact on manufacturing of specific roofing materials, specifically plywood, metal and fasteners. As a result, manufacturers of these products have increased their costs.

On page 4 of this report are estimated construction costs for all roof areas representing removal and replacement in 2021 at all areas and, for comparison, estimated construction costs in 2024 at Areas A, D and E.

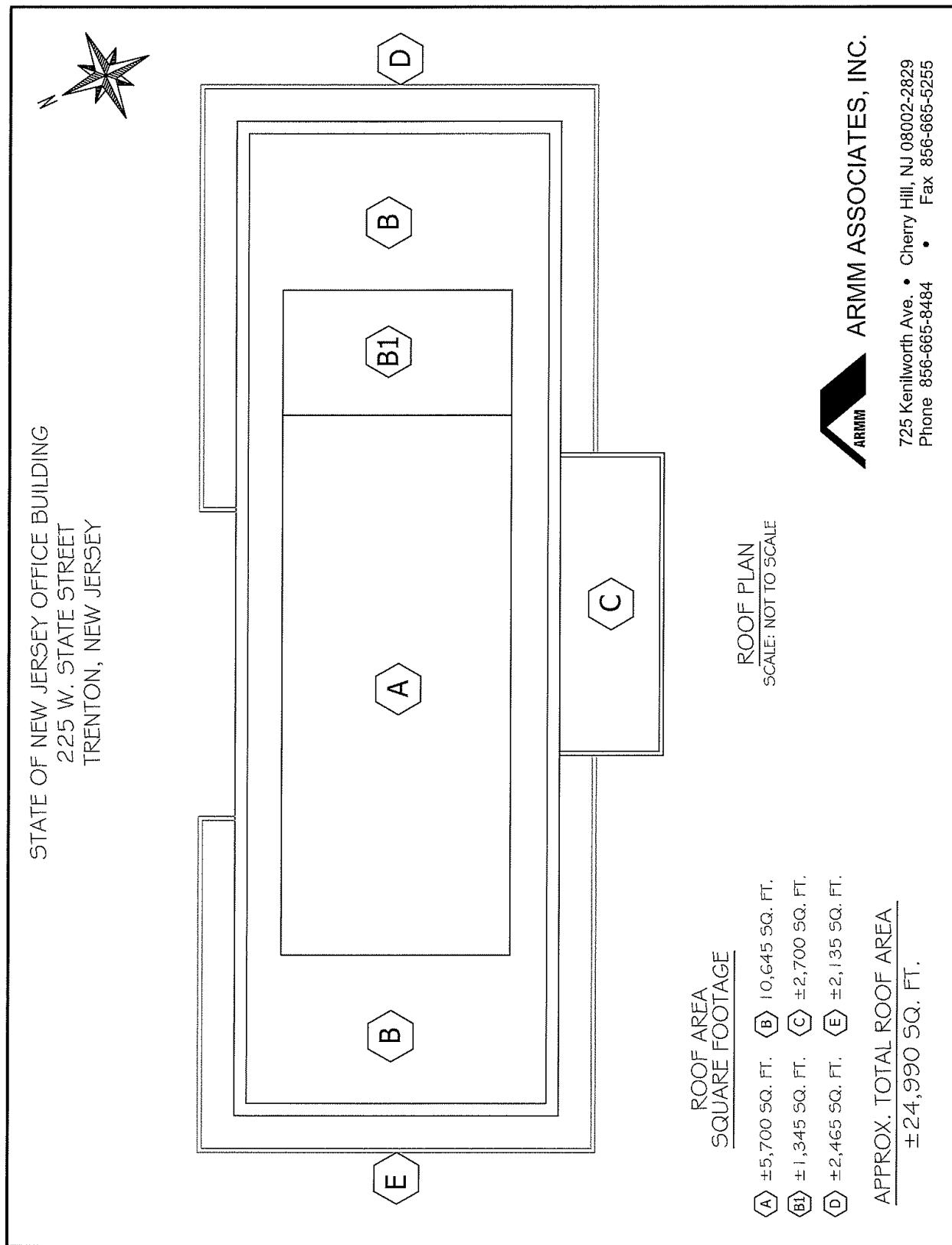
Roof Area	Square Feet	Recommended Replacement Year	Estimated Construction Costs (2021)	Estimated Construction Costs (2024) at select areas
A	5,700	2021 to 2024	\$242,250.00	\$305,235.00
B	10,645	2021	\$452,412.50	n/a should be replaced immediately
B1	1,345	2021	\$57,162.50	n/a should be replaced immediately
C	2,700	2021	\$114,750.00	n/a should be replaced immediately
D	2,465	2021 to 2024	\$104,762.50	\$132,000.75
E	2,135	2021 to 2024	\$90,737.50	\$114,329.25
<b>Total estimated construction costs <u>all</u> roof areas (24,990 square feet) in the year 2021</b>			<b>\$1,062,075.00</b>	
<b>Total estimated construction costs at Roof Areas A, D and E only (10,300 square feet) in 2024</b>				<b>\$551,565.00</b>

Should you have any questions please do not hesitate to call.

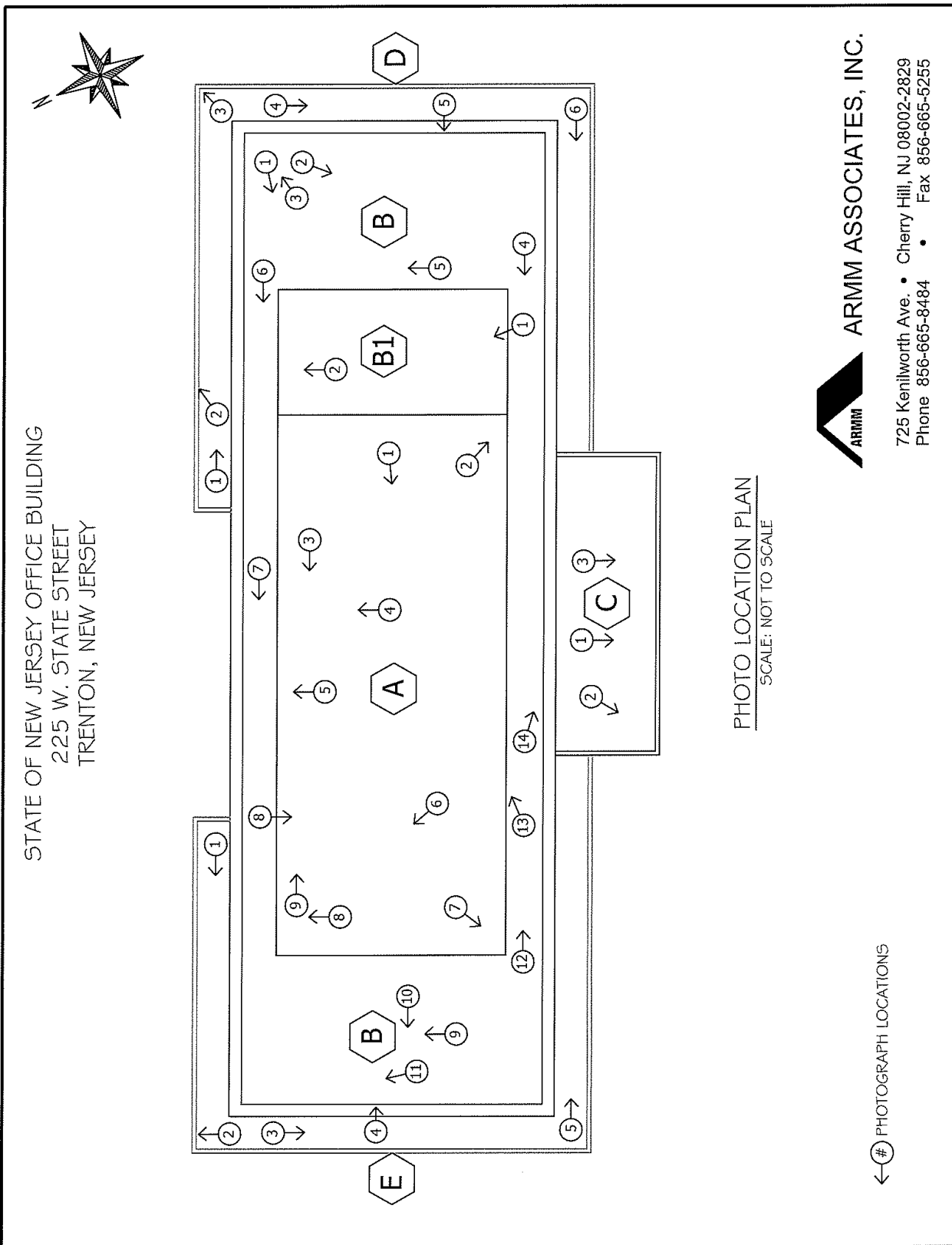
Sincerely,

\ JMH

John M. Hillman  
 Senior Project Field Inspector



**EXHIBIT 'D'**



**EXHIBIT 'D'**



1. Roof Area A: Overall view of Roof Area A showing the aggregate surfaced built-up roof system in place.



2. Roof Area A: Photograph showing previous repairs made at the perimeter membrane metal flange stripping.

## EXHIBIT 'D'



3. Roof Area A: Partial overall view of the existing aggregate surfaced built-up roof system. Note the blisters in the field of the roof.



4. Roof Area A: Close-up view of a blister. Overtime, the aggregate erodes off the membrane leaving the top roof coating exposed to the elements. This photograph clearly shows that the membrane coating is missing, exposing the membrane. The pencil indicates an opening in a lap seam.

## EXHIBIT 'D'



5. Roof Area A: Previous repairs were noted at the perimeter.



6. Roof Area A: Another close-up of an elevated blister in the field of the roof. The protective aggregate surfacing has eroded away.

## EXHIBIT 'D'



7. Roof Area A: View showing a large section of Area A where repairs have been performed to stop leaks.



8. Roof Area A: Another section of Roof Area A whereby repairs were made with new materials.

# EXHIBIT 'D'



1. Roof Area B: Partial overall view of Roof Area B showing numerous previous repair attempts to stop leaks.



2. Roof Area B: Another partial overall view showing numerous repairs made to stop leaks.

## EXHIBIT 'D'



3. Roof Area B: Another section of Area B with more repairs.



4. Roof Area B: Alternate view of Area B showing more repairs. Note the white material utilized for repairs which indicates that it was performed more recently than the other repairs.

## EXHIBIT 'D'



5. Roof Area B: Close-up view of an elevated membrane blister on Area B.



6. Roof Area B: Partial view of Area B showing more repairs and numerous membrane blisters.

## EXHIBIT 'D'



7. Roof Area B: As with the other photographs of Area B, this picture depicts the overall poor condition of the membrane, blisters, wrinkling and several repair attempts made to stop leaks.



8. Roof Area B: Repairs made to the membrane base flashing. The dark discoloration noted in this picture indicates an area whereby water ponds (blue circle).

## EXHIBIT 'D'



9. Roof Area B: Another overall view of **numerous** repairs made within the field and perimeter.



10. Roof Area B: Close-up view of membrane blistering.

## EXHIBIT 'D'



11. Roof Area B: View of the perimeter parapet wall showing multiple repairs, blisters and degraded membrane conditions.



12. Roof Area B: Almost every area of Roof Area B our inspector found evidence of wide-spread repairs.

## EXHIBIT 'D'



13. Roof Area B: View showing a blister at the inside wall on Area B along with previous repair attempts.



14. Roof Area B: Recent repairs made on Area B (whiter materials).

## EXHIBIT 'D'



1. Roof Area B1: Partial overall view of Roof Area B1 showing numerous repairs. Some of the repairs were made recently as indicated by the whiter materials (red arrow).



2. Roof Area B1: Close-up view showing the condition of the membrane, repairs and blistering.

## EXHIBIT 'D'



1. Roof Area C: Partial overall view of Area C showing a recent large repair made in the field.



2. Roof Area C: Another overall view adjacent to the repaired area seen in photograph #1 above. The roof system on Area C is degraded and should be replaced as soon as funding is available.

## EXHIBIT 'D'



3. Roof Area C: Additional view at the repaired area.



1. Roof Area D: Partial overall view of the ballasted EPDM roof system on Roof Area D.

## EXHIBIT 'D'



2. Roof Area D: Close-up showing the marble wall panels which started to split. Duct-tape was provided over the splits (blue arrows) in an attempt to keep water away from the roof system.



3. Roof Area D: Photograph showing numerous pieces of duct-tape used to cover splits in marble.

## EXHIBIT 'D'

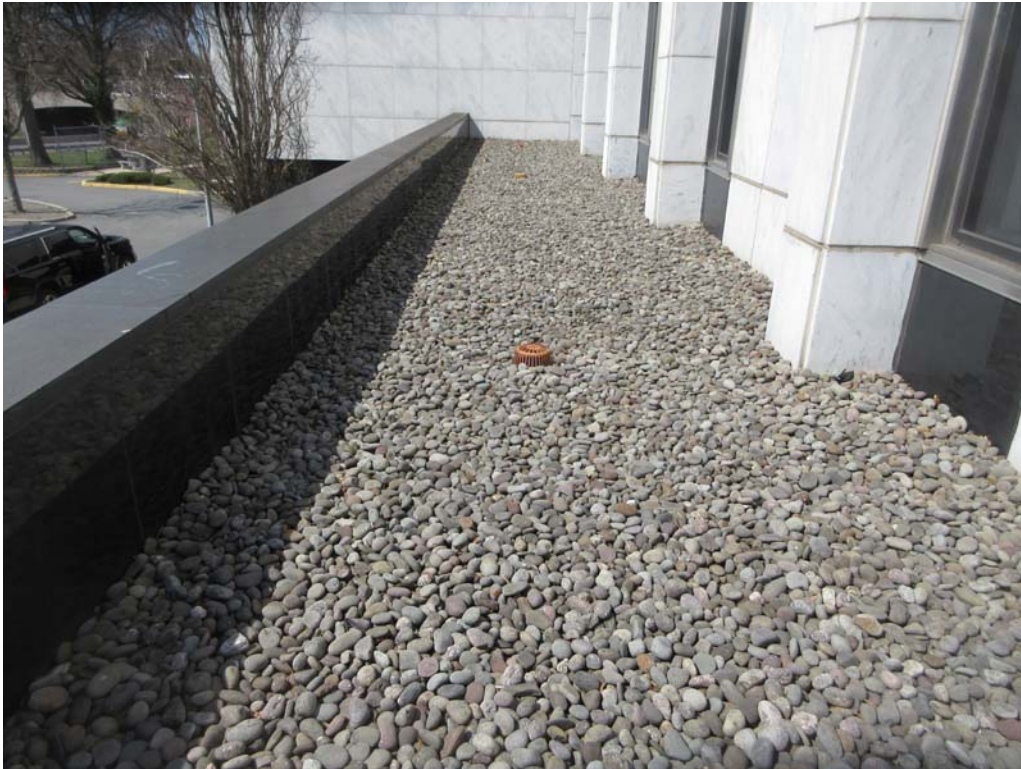


4. Roof Area D: Additional partial overall view.



5. Roof Area D: Close-up taken at the base of the building wall panel showing the ballast above the bottom of the panel.

## EXHIBIT 'D'



6. Roof Area D: Additional overall view of Area D looking southwest.



1. Roof Area E: Partial overall view looking southwest on Area E showing numerous repairs made with duct-tape on the wall panels.

## EXHIBIT 'D'



2. Roof Area E: Another partial view of Area E; here again, duct-tape was used to cover splits in marble wall panels.

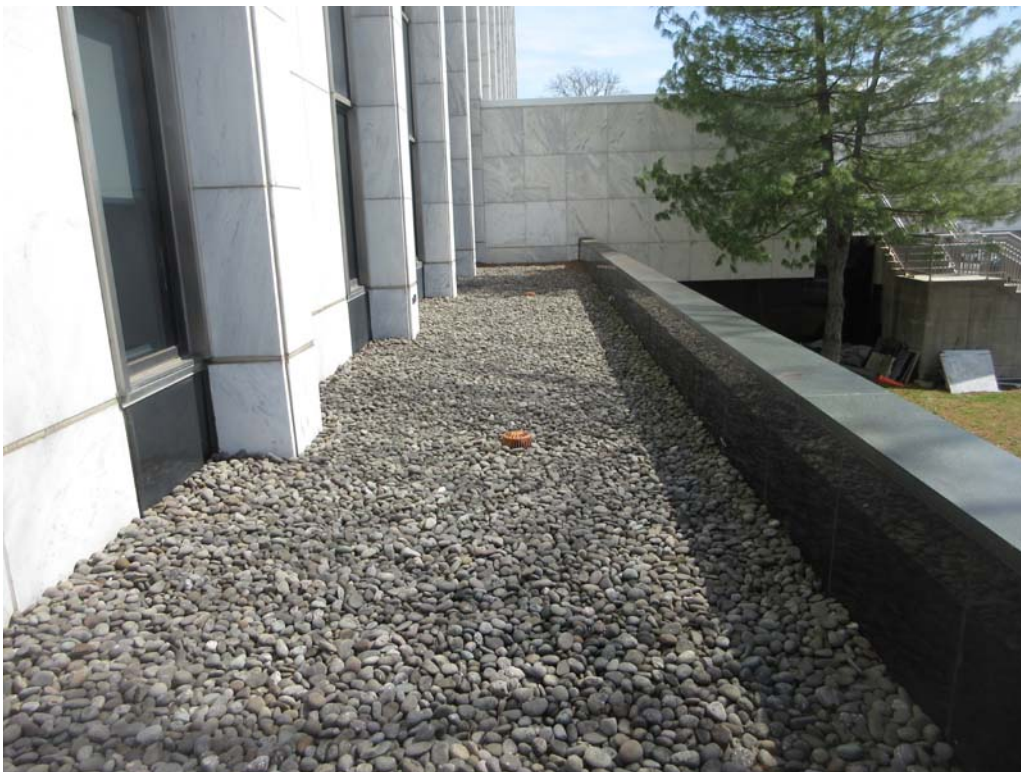


3. Roof Area E: Additional view of Area E.

## EXHIBIT 'D'



4. Roof Area E: Close-up view of the marble wall panel on Area E.



5. Roof Area E: Alternate view of E.

## EXHIBIT 'D'