State of New Jersey
DEPARTMENT OF TREASURY
DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION
P O BOX 034
TRENTON NJ 08625-0034

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

ELIZABETH MAHER MUOIO
State Treasurer

CHRISTOPHER CHIANESE
Director

January 4, 2024

Clarke Caton Hintz, PC
100 Barrack Street
Trenton, NJ 08608
Attn: John Hatch

Re: A1390-00 – **Notice to Proceed SBE Set-Aside**
HVAC Upgrades
Old Barracks Museum
Trenton, Mercer County, NJ

Dear Mr. Hatch:

This is notification that the above referenced project was awarded to your firm in the amount of $517,983.00 and serves as your Notice to Proceed. The design duration shall be 203 calendar days from the Notice to Proceed to the final plan review approval.

Your services will be in accordance with the Request for Proposals dated October 03, 2023, Scope of Work dated July 06, 2023, your technical proposal dated October 31, 2023, original fee proposal dated October 30, 2023, the Agreement between the State of New Jersey and the Consultant and the General Conditions to the Consultant Agreement dated May 2016.

Please contact [redacted] to set up the kick-off meeting.

We look forward to the successful completion of this project.

Please sign below and return by email to William.mahan@treas.nj.gov.

Sincerely,
Christopher R. Geary
Assistant Deputy Director

c: O. Popinako, M. Dae, Central File, J. Langsdorf, M. Ferrara, G. Cardone, W. Hamilton

Receipt and Understanding is Hereby Acknowledged:

John Hatch AIA 1/8/2024
Name Date

Principal, Clarke Caton Hintz
Title

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/14/2023

PRODUCER

WHITEHORN FINANCIAL GROUP INC
[redacted]

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A: Continental Casualty Company	[redacted]
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

INSURED
Clarke Caton Hintz

100 Barrack Street
Trenton, NJ 08608

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$
		☐ COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurence)	$
		☐ CLAIMS MADE ☐ OCCUR				MED EXP (Any one person)	$
						PERSONAL & ADV INJURY	$
						GENERAL AGGREGATE	$
		GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	$
		☐ POLICY ☐ PRO-JECT ☐ LOC					
		AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$
		☐ ANY AUTO				BODILY INJURY (Per person)	$
		☐ ALL OWNED AUTOS					
		☐ SCHEDULED AUTOS				BODILY INJURY (Per accident)	$
		☐ HIRED AUTOS					
		☐ NON-OWNED AUTOS				PROPERTY DAMAGE (Per accident)	$
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		☐ ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	$
		☐ OCCUR ☐ CLAIMS MADE				AGGREGATE	$
							$
		☐ DEDUCTIBLE					$
		☐ RETENTION $					$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				☐ WC STATU-TORY LIMITS ☐ OTH-ER	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT	$
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	$
						E.L. DISEASE - POLICY LIMIT	$
		OTHER Errors and Omissions	AEH 28-828-00-65	01/06/24	01/06/25	$2,000,000 Per Claim and Aggregate	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Re: A1390-00 HVAC Upgrades - Old Barracks Museum, Trenton, Mercer County, NJ

CERTIFICATE HOLDER

State of NJ Dept. of Treasury – DPMC
Contracts & Procurement Unit
33 West State St.
PO Box 034
Trenton, NJ 08625

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESEN[redacted]

HVAC UPGRADES: OLD BARRACKS MUSEUM

STATE OF NEW JERSEY - DPMC / #A1390-00

OCTOBER 31, 2023

Clarke Caton Hintz
Trenton, NJ · 609 883 8383 · clarkecatonhintz.com

Mr. [redacted]
Stat[redacted] DPMC
33 W[redacted] Floor
Trenton, NJ 08625

October 31, 2023

RE: HVAC Upgrades; The Old Barracks Museum
A1390-00

Dear Mr. Mahan:

On behalf of the entire Clarke Caton Hintz (CCH) team, we are pleased to submit our qualifications and proposal for the HVAC Upgrades project at the Old Barracks Museum in Trenton, NJ. We are particularly interested in this project as this National Historic Landmark is located directly across the street from our offices. We are familiar with the extraordinary building, its wonderful programs and the limitations of its HVAC system.

Given that, we believe we have assembled the ideal team of professionals selected both for their experience with sensitive historic preservation projects and because of their familiarity with the site and project. The team is:

FIRM	M/W/SBE	DPMC	DISCIPLINE
Clarke Caton Hintz, PC	SBE	Unlimited	Historic Architecture
Princeton Engineering Group	SBE	$5 Million	MEP Engineering
Becker & Frondorf		No Fixed Amount	Cost Estimating
Harrison-Hamnett, PC	SBE	Unlimited	Structural Engineering
Hunter Research	SBE	No Fixed Amount	Archaeology
B&G Engineering	SBE		Site/ Civil Engineering

These team members have worked together on a variety of relevant historic preservation projects. We all understand the sensitive nature of the historic resource and the importance of following the Secretary of the Interior's Guidelines for the Treatment of Historic Properties. Enclosed please find our technical proposal including team experience, data sheets, personnel list and project approach, and our separate fee proposal.

This is a particularly significant site that played an important part in the American Revolution and beyond. We're looking forward to the possibility of working at the Old Barracks to address these sensitive HVAC issues so that the building can live up to its full potential as a museum reflecting colonial and Revolutionary War history. If you should have any questions or require any additional information, please do not hesitate to contact me at (609) 883-8383 Ext. 304.

Sincerely,

[redacted]
Principal-In-Charge

TABLE OF CONTENTS

SECTION 1:
Firm/Project Team Experience

1.0 FIRM/ PROJECT TEAM EXPERIENCE

The rear of the Old Barracks Museum. CCH recently assisted the Museum in gaining a National Park Service grant for exterior repairs, including the roof, exterior woodwork and the perimeter fence. This work will need to be coordinated with the HVAC project.

Clarke Caton Hintz (CCH) is a multi-disciplinary design firm with 45 years of experience dealing with many of the most sensitive design contexts in New Jersey and across the region. Our collaborative approach brings the perspectives of architects, historic preservationists, planners, urban designers, landscape architects and interior designers to bear on every project. Integrating this diverse and complementary combination of professional views is fundamental to our design process. Each provides a particular perspective that, when brought together, adds significantly and concretely to the design process and the final product.

All of our historic preservation design work begins with respect for the existing building, its history and its historic fabric, and an understanding of the importance of appropriate use and maintenance of the resource. This is particularly important for a significant Colonial and Revolutionary War site like the Old Barracks Museum. Obviously, we understand and deeply respect the Secretary of the Interior's Standards for the Treatment of Historic Properties. This commitment and our extensive experience will inform our design work as we address the pressing needs identified in this RFP.

CCH is familiar with virtually all of New Jersey's significant Revolutionary War sites, including the Old Barrack Museum, as we were the lead consultants for the Site and Visitor Readiness Assessment completed for Crossroads of the American Revolution. This project is one of the crucial pieces needed to making this site comfortable for visitors enjoying our nation's 250th anniversary. It is also crucial so that the Museum can appropriately display and protect historic artifacts.

The CCH team is expert at working with and understanding existing and historic buildings and their contexts, and we are experts at how to make historic buildings work with new uses and new building

systems. PEG and CCH, along with the assistance of our structural engineers, have extensive experience figuring out how to design and install these new systems, especially HVAC, so that they are unobtrusive, don't damage the historic fabric both during installation and during operation, and that they are appropriate for the building and the artifacts on display and being stored.

For the Old Barracks Museum project, we have put together a team of experts that has worked together numerous times, and that understands every aspect of historic preservation. Our key team members include Princeton Engineering Group (MEP/FP Engineers), Becker & Frondorf (Cost Estimators), Harrison-Hamnett, PC (Structural Engineers) and Hunter Research (Archaeology). Our other consultant on the team, but not considered key team members is B&G Engineering (Site/Civil/ Survey).

We have worked with all of these firms for many years, including on many historic preservation projects. Please see the attached project experience sheets for CCH and our team of consultants; these emphasize our relevant historic preservation experience.

Expertise:

The team that we have assembled has all of the practical and technical experience and expertise required to complete this sensitive project. We have all worked on numerous historic buildings. Both John Hatch and Julie Kroon exceed the minimum professional qualification standards for a Historic Architect with more then 40 years of historic preservation experience between them.

John D. S. Hatch, FAIA, LEED AP, Principal, is the Principal-in-Charge for the project and is well known for his work on complex projects, both new construction and historic and existing buildings, that come in on-time and under budget. He understands the particular issues that arise in existing and historic buildings, and has extensive experience working with historic masonry issues, ADA access, and completing building assessments and preservation plans. He also has extensive experience working with the NJ Historic Preservation Office. John will have overall responsibility for making sure the entire team produces excellent and timely work. His large body of award-winning projects with repeat clients is a testament to his effectiveness.

Julie Kroon, AIA, is the Project Manager for the project. She will have the day-to-day responsibility and will make sure the project progresses smoothly and quickly. Julie has extensive historic preservation experience including the Newark Symphony Hall with CCH, and numerous previous historic preservation projects.

Earl Heim, Project Designer, has extensive research and construction administration experience including the Trenton City Hall Plaza Rehabilitation and the Burlington Historic Carriage House Restoration. He will assist and support the CCH team during assessment, documentation and construction administration phases.

Princeton Engineering Group has tremendous expertise with assessing and improving existing MEP systems, or designing new, unobtrusive systems in the most cost effective and sustainable way. We have worked with PEG on numerous projects, including numerous preservation plans. They are conscientious, innovative and responsive. Some of our historic work together includes the restoration of the John W. Rea House in Hawthorne, NJ, preservation plans for the Proprietary House and the William Trent House and Lambert Castle and Carriage House located in Paterson, NJ. CCH has worked extensively with the two lead engineers on the project, Michael Berry and Rich Olszewski.

Becker & Frondorf are cost estimators with extensive experience working with CCH and estimating work at significant historic structures. They will be able to provide accurate cost information so that the design and project team can confirm costs and adjust our project strategy at every step of the design process.

Harrison-Hamnett, is New Jersey's premier structural engineering firm, including work dealing with existing and historic buildings. Because of their expertise and common sense approach, we have worked with

them almost exclusively for more than 20 years. They will provide any structural engineering design work needed for reinforcing the structure for the new equipment, and for assisting in the design if structure needs to be adjusted during the installation process.

Hunter Research will handle the archaeological assessment to be undertaken during the Schematic Design and Design Development phases of the project once locations of planned ground disturbance can be adequately delineated. Depending on the findings of the archaeological testing, minor design changes may be required to avoid significant archaeological resources or some form of mitigation may be necessary (either monitoring during construction or data recovery). Hunter Research is the preeminent archaeology and cultural resource consulting firm in the region. Like CCH, their offices are very close to the site, and they know more about the archaeological resources here than any other firm.

CCH's multi-phase work at the Historic Hunterdon County Courthouse included the restoration of historic spaces and the careful introduction of state of the art systems, including HVAC, in the most unobtrusive ways possible.

PROJECT TEAM EXPERIENCE

Millington Schoolhouse/Old Town Hall | Long Hill Township, NJ

Phased restoration of an 8,000 sf, long vacant historic building as community, exhibit and office space:

- CCH successfully nominated the building for inclusion on the National and NJ Registers of Historic Places and prepared the preservation plan.
- Phase 1 restored the building exterior including new synthetic shake roof. woodwork restoration and repainting; new ADA ramp; and repair of masonry foundations; Phase 2 addressed the interior restoration including construction of ADA restrooms; and Phase 3 addressed tenant improvements. Phases 2 and 3 included all new building systems, including HVAC.

Construction Cost: **$850,000**

Hoboken Public Library | Hoboken, NJ

Clarke Caton Hintz, working closely with the Hoboken Public Library and the Board of Trustees, developed a Capital Master Plan to help the Library move forward with renovations and fundraising. The first phase, restoration of the third floor as a Children's Library, Teen Center and office space, along with the replacement of the outdated and failing HVAC system in the entire building, was recently completed.

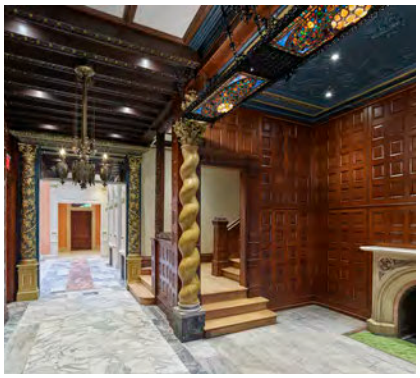
Construction Cost: **$7.1 Million**

Wicoff House | Plainsboro, NJ

Historic Rehabilitation of historic house as museum of local history and offices:

- Built as the impressive home of one of Plainsboro's founding families, it became the town hall and then sat empty for a number of years.
- CCH work included a preservation plan, exterior restoration (including exterior woodwork and stone foundations), interior restoration of historic first floor finishes to create the museum, new building systems and the renovation of the second floor as tenant space.
- Project received Project Authorization from the NJHPO

Construction Cost: **$2 Million**



Lambert Castle | Paterson, NJ

Restoration and Repairs to this significant historic structure, which is now a museum:

- Exterior restoration, including windows, masonry and new roof.
- Restoration of elaborate interior finishes
- Design and installation of all new building systems, including conversion of steam to hydronic, and new LED lighting, etc.
- Received project authorization from the State Historic Preservation Office.

Construction Cost: **$6.8 million**

Passaic County Arts Center at the John Rea House | Hawthorne, NJ

1820 historic structure in Passaic County transformed into an arts center:

- CCH designed ADA comfort stations on the lower level for the adjacent Olmsted designed park. All floors were made accessible with a new exterior ramp, interior LULA lift and the building was provided with completely new MEP/FP systems.
- Exterior restoration consisted of new wood replacement windows, new doors, stone repairs and repointing. Received project authorization from the State Historic Preservation Office.

Construction Cost: **$2 million**

Princeton Engineering Group (MEP) Experience:

1. Passaic County Arts Center at the John W. Rea House (In Conjunction with CCH)
2. Eastpoint Light House, Heislerville, NJ
3. Iviswold, "The Castle" at Felician College, Rutherford, NJ
4. Princeton Friends School, Schoolmaster's House, Princeton, NJ
5. The William Trent House, Trenton, NJ (In Conjunctions with CCH)

Becker & Frondorf (Cost Estimating) Experience (All in Conjunction with CCH):

1. William Trent House, Trenton, NJ
2. Brearley House, Lawrence, NJ
3. Tuttle House, Whippany, NJ
4. Lindenwold Mansion, Morristown, NJ
5. Wicoff House, Plainsboro, NJ

Harrison-Hamnett (Structural) Experience (All in Conjunction with CCH):

1. William Trent House, Trenton, NJ
2. Brearley House, Lawrence, NJ
3. Tuttle House, Whippany, NJ
4. Wicoff House, Plainsboro, NJ
5. Benjamin Cooper Tavern, Camden, NJ

Hunter Research (Archaeology) Experience:

1. Historic Morven, Princeton, NJ; (In Conjunction with CCH)
2. Benjamin Cooper House, Camden, NJ (In Conjunction with CCH)
3. William Trent House, Trenton, NJ; (In Conjunction with CCH)
4. Proprietary House, Perth Amboy, NJ; (In Conjunction with CCH)
5. Major Henry Phillips House, Hopewell, NJ

View from Goffle Road


Historic Image (ca 1930)


Gallery (Before)


Gallery (Before)

PASSAIC COUNTY ARTS CENTER AT THE JOHN W. REA HOUSE

Hawthorne, NJ

The John W. Rea House, built in 1810, entered the State and National Register of Historic Places in 1999. CCH was tasked to restore and adapt the former house into a new arts center. The lower level provides comfort stations for the adjacent Olmstead designed park. All floors were made accessible through the addition of a new LULA lift and the building was provided with completely new building systems.

Exterior restoration consisted of new wood replacement windows, new doors, stone repairs and repointing. New lighted brick footpaths were installed. Plantings include new trees, shrubbery, ground cover and flowering vegetation. Dense shrubbery was provided to screen mechanical equipment along the North side of the property. During the 1930's, the front yard was bounded by a low garden wall. This was reconstructed to provide opportunities for signage.

Client

County of Passaic

Program

Historic Renovation For Use as Comfort Station, County Offices and an Arts Center

Cost

$2 Million

PASSAIC COUNTY ARTS CENTER AT THE JOHN W. REA HOUSE

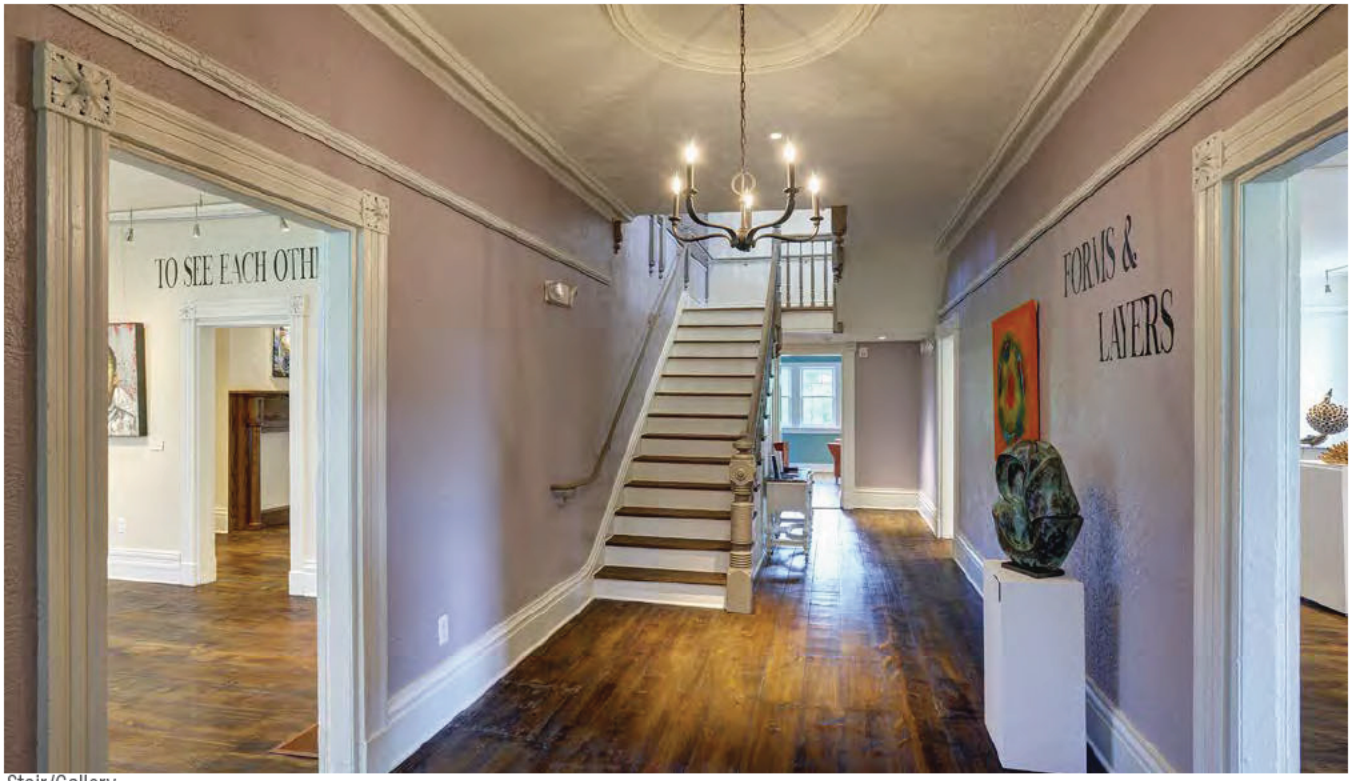
Hawthorne, NJ

View from Goffle Road

View from Parking

PASSAIC COUNTY ARTS CENTER AT THE JOHN W. REA HOUSE

Hawthorne, NJ



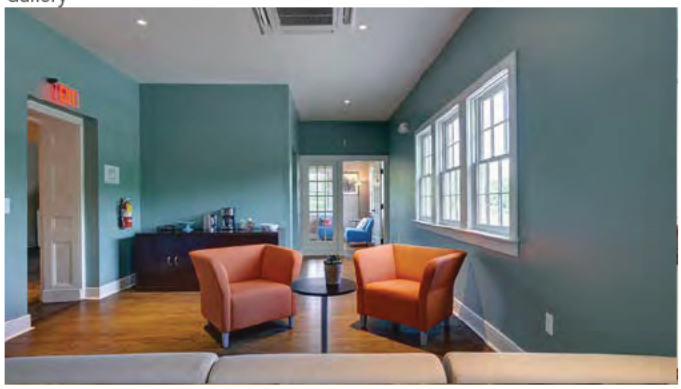
Stair/Gallery

Gallery

PASSAIC COUNTY ARTS CENTER AT THE JOHN W. REA HOUSE

Hawthorne, NJ

Gallery



Gallery

Gallery

Multi-Purpose Room

View from Valley Road

Historic Image

Historic Image

Historic Image

LAMBERT CASTLE

Paterson, NJ

Originally constructed in 1892 as the home of Catholina Lambert, the sprawling estate originally included the mansion, gatehouse, carriage-green house complex, and formal Italianate gardens. Four years later, Lambert added an art gallery. Lambert's silk business thrived until the 1890's. To accompany his rise in fortune, Lambert decided to build a new home, "Belle Vista", befitting his station as one of Paterson's leading industrialists. It was here that Lambert displayed many of his prized European and American paintings. The interior of the Castle reflected the eclectic styles of the Gilded Age.

Since 1928 Lambert Castle has operated the building as a museum, library and meeting space. Lambert Castle is one of several rare examples of the fully developed form of castellated residential architecture in America.

The restoration allows for the continued use of Lambert Castle. The exterior and interior were faithfully restored to the period of significance. Work included masonry repair, window replacement, roofing, HVAC modifications and the restoration of historic finishes. New LED lighting was provided to serve the art collection. Future work includes the adaptive reuse of the Carriage House and the restoration of the North Lawn.

Client

County of Passaic

Program

Restoration of Castle as Art Museum

Cost

$6.8 Million

LAMBERT CASTLE

Paterson, NJ

Arerial View

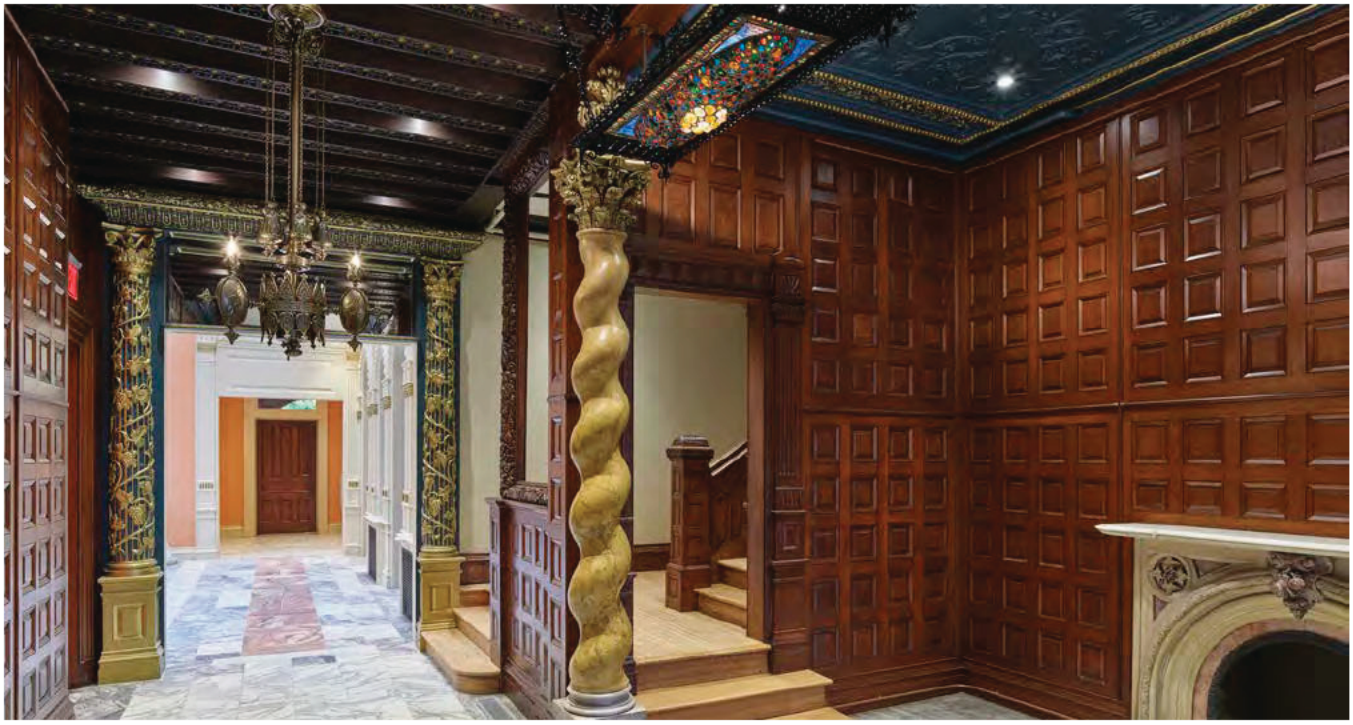
View from Entry Drive

View from Entry Drive

View from North Lawn

LAMBERT CASTLE

Paterson, NJ



Entry

Lighting Detail

Gallery/Lambert's Office

Stair

LAMBERT CASTLE

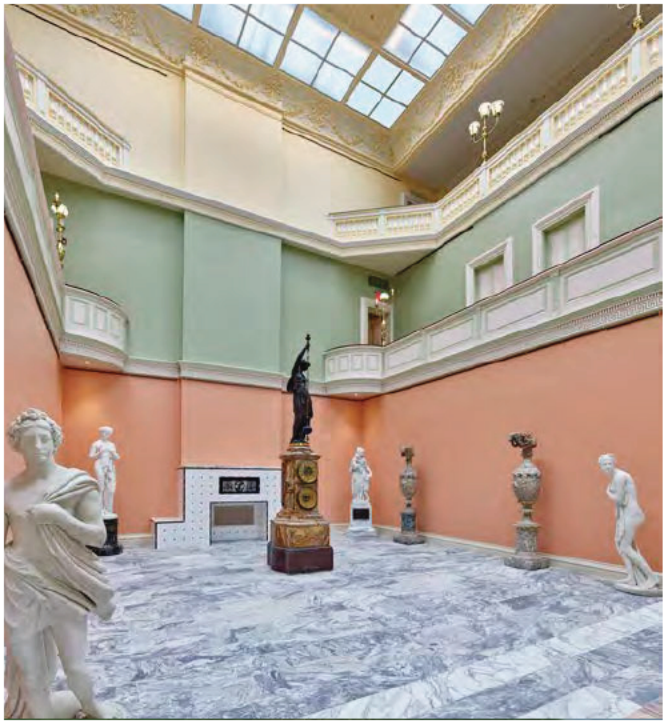
Paterson, NJ

Gallery/Dining Room

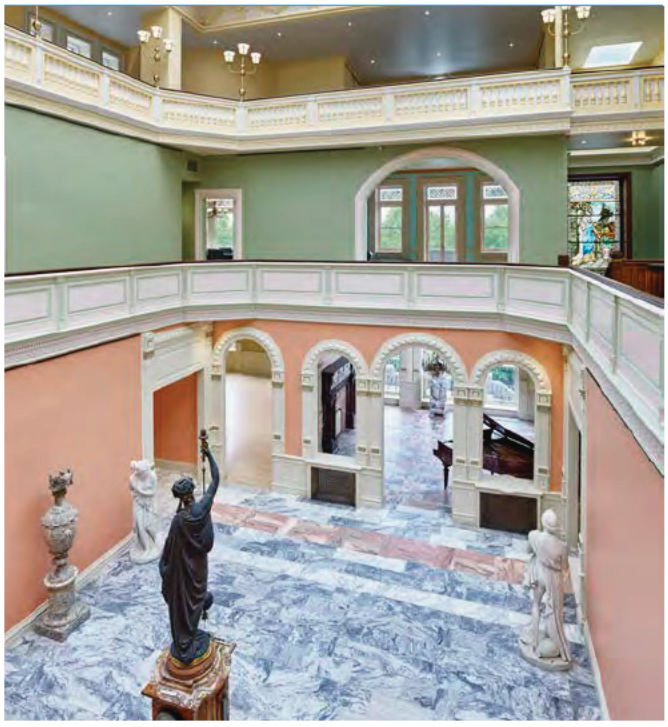
Gallery/Dining Room

LAMBERT CASTLE

Paterson, NJ



Gallery/Atrium



Gallery/Atrium

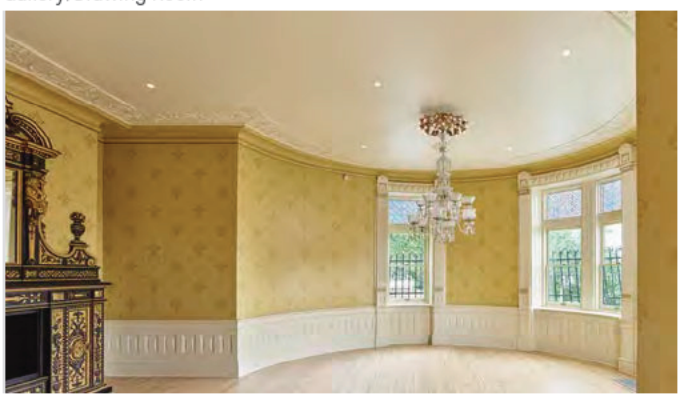
Gallery/Atrium

LAMBERT CASTLE

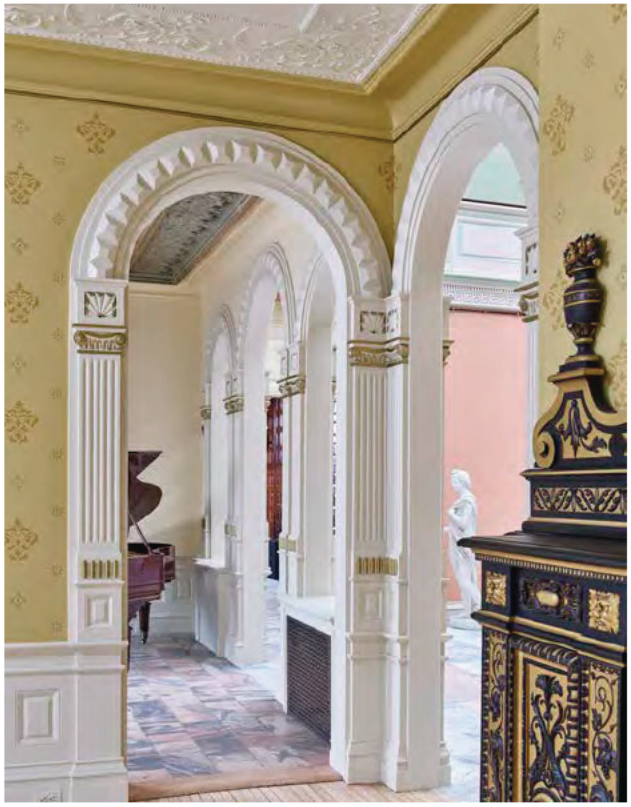
Paterson, NJ

Gallery/Music Room

Gallery/Drawing Room



Gallery/Drawing Room



Gallery/Drawing Room

View from Entry Drive

Historic Image Ca. 1906

Exterior Before

Interior Before

WICOFF HOUSE

Plainsboro, NJ

Built in the late 1870's, the Wicoff House is the ancestral home of the Wicoff family, prominent local farmers. Since 1977, the house was used as a community center and the Plainsboro Museum. Underutilized for several years, Clarke Caton Hintz developed a Preservation Plan to guide the restoration efforts as well as the collections and exhibit planning. Later phases of work included exterior stabilization, interior restoration of historic first floor finishes, new building systems and the renovation of the second floor as tenant space.

The Wicoff House is listed on the National and New Jersey State Register of Historic Places. All work conformed to the U.S. Department of the Interiors' Standards for the Treatment of Historic Properties.

Client

Township of Plainsboro

Program

- Preservation Plan
- Comprehensive Restoration at House Museum

Cost

$2 Million

WICOFF HOUSE

Plainsboro, NJ

Main Entry

Township Timeline

Gallery

Gallery

View from Campus

Gallery

Library Exterior

Historic Exterior Photo (ca. 1902)

Exterior (Before)

Interior (Before)

HOBOKEN PUBLIC LIBRARY

Hoboken, NJ

The Hoboken Public Library has served the city since its completion in 1897. It has an impressive Italian Renaissance facade of limestone, brick and terra cotta with copper detailing, and an ornate interior.

CCH, working closely with the Board of Trustees, developed a "Capital Master Plan" that acted as a road map to completely rehabilitate, restore and expand the Library.

CCH has completed Phase 1 for the restoration of the third floor as a Children's Library, Teen Center and office space, along with the replacement of the outdated and failing HVAC system in the entire building.

Client

Hoboken Public Library

Program

Master Plan for Capital Improvements and Restoration of Historic Library

Cost

$7.1 Million

Clarke Caton Hintz

HOBOKEN PUBLIC LIBRARY

Hoboken, NJ

General View of 3rd Floor

Children's Area

HOBOKEN PUBLIC LIBRARY

Hoboken, NJ

Young Adult Area

Young Adult Area

Maker Space

View from Long Hill Road

Historic Image (Ca. 1882)

Exterior (Before)

Interior of former Schoolhouse (Before)

MILLINGTON SCHOOLHOUSE/OLD TOWN HALL

Long Hill Township, NJ

The Millington Schoolhouse /Old Town Hall is a treasured landmark within Long Hill Township. The building began as a one room schoolhouse. Later, the building served as a library and most recently as the Township's municipal building. Vacant for several years, the Township retained Clarke Caton Hintz (CCH) to nominate the building for inclusion on the National and New Jersey Registers of Historic Places and have a preservation plan prepared.

With the successful completion of these tasks, CCH prepared construction documents for a phased restoration of the building. The initial phase restored the exterior of the building. Phase 2 addressed the interior restoration inclusive of historic finishes and building systems and Phase 3 addressed tenant improvements.

Client

Long Hill Township, NJ

Program

- Preservation Plan
- Phased Renovation of Historic Building
- National Register of Historic Places Nomination

Cost

$850,000

MILLINGTON SCHOOLHOUSE/OLD TOWN HALL

Long Hill Township, NJ

View from Parking Lot

Former Schoolhouse

The Proprietary House in Perth Amboy is the only surviving Royal Governor's residence in the U.S.

PROPRIETARY HOUSE

Perth Amboy, NJ

Clarke Caton Hintz led the team that prepared a full preservation plan and feasibility study to preserve and restore this significant historic structure and make it ready for the nation's 250th anniversary in 2026.

The oldest portion of the house, completed in 1764, is the only surviving colonial era governor's mansion still in existence in the US. William Franklin, New Jersey's last royal governor and Benjamin Franklin's son, lived in the house with his family, and the site has significant associations with the American Revolution. Expanded in the 19th century as the Brighton House, the site played an important role in NJ and Perth Amboy through the early 20th century.

The many stories embodied in the buildings and grounds of the Proprietary House can provide compelling insight into Perth Amboy, New Jersey and American history. The plans developed by the CCH team include access, interpretative and other recommendations that will expand understanding of this significant site and make it more usable and sustainable for the long-term.

Client

Crossroads of the American Revolution; The Proprietary House Association

Program

Preservation Plan & Feasibility Study

PROPRIETARY HOUSE

PERTH AMBOY, NJ

Dining Room on the first floor of the Proprietary House

Fanlight at the main entry door to the Proprietary House

Drawing Room of the Proprietary House

View Along River Road

GARRETSON FORGE AND FARM

Fairlawn, NJ

Garretson Forge and Farm is an historic site comprised of a pre-Revolutionary War sandstone house, a mid- Nineteenth century carriage house and numerous out buildings. The site is a living Dutch Farm museum and is listed on the National and New Jersey Register of Historic Places. Due to the amount of archeological artifacts found on site, many believe this was originally a Native American Indian encampment, later serving as the extensive Garretson Family Farmstead.

The restoration work included exterior and interior improvements to the Main House. These improvements included masonry cleaning/ repointing, fire system upgrades and interior structural stabilization. Site improvements included new signage, a handicapped accessible parking lot and pathways, and foundation repairs, siding replacement and re-painting at the outbuildings.

Client
County of Bergen

Program
Restoration of Historic Farmstead

Cost
$500,000

GARRETSON FORGE AND FARM

Fairlawn, NJ

Barns

Gift Shop

Exhibit Space

Exhibit Space

View from Stockton Street

HISTORIC MORVEN

Princeton, NJ

Historic Morven, national landmark, underwent a careful, multiphase restoration carried and in accordance with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties.

The first phase of construction included the full restoration of the Icehouse as a Visitor's Center, the exterior restoration of the Main House, the construction of handicapped accessible restrooms and entries, and the restoration of the gardens. Phase two completed the interior space-by-space interpretive restoration of the Main House and included the installation of an elevator and all new building systems.

Morven is the ancestral home of the Stockton family. It was built around 1758 by Richard, a signer of the Declaration of Independence, and Annis Boudinot Stockton. The house remained in the Stockton family for almost two centuries. In 1945, it was sold to Governor Walter Edge who in turn gave it to the State of New Jersey in 1954 and was used until the early 1980's as the Governor's Mansion. The history of the house represents important periods in New Jersey history.

Client

State of New Jersey/ New Jersey State Museum

Program

Restoration of 1758 National Landmark for use as a museum

Cost

$2.5 Million

HISTORIC MORVEN

Princeton, NJ

Back From Garden

Main Entrance

Patio

View of Icehouse

HISTORIC MORVEN

Princeton, NJ

Gallery

Main Staircase

HISTORIC MORVEN

Princeton, NJ

View to Gallery

View from Drawing Room to Gallery

Main Entrance

HISTORIC MORVEN

Princeton, NJ

View of Garden

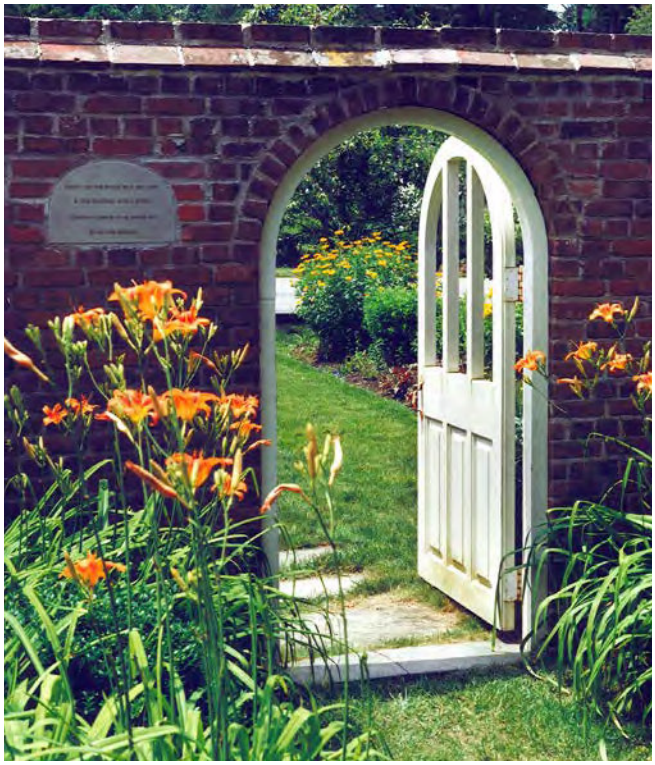
Detail of East Wing

View of Garden

HISTORIC MORVEN

Princeton, NJ

Main Entry



Garden Gate

Trellis

View of House Museum

TUNIS COOPER/MARCHBANK ESTATE

Bergenfield, NJ

The Tunis Cooper Property is located in the heart of Bergen County, the most populated county in New Jersey. The 4.36-acre property is nestled within a congested residential neighborhood. The four buildings on the property date back the 18th and 19th centuries and once housed a well-known chair manufacturing company founded by Tunis Cooper.

After preparing a Historic Structures Report for the Borough that acted as a planning document to guide, prioritize, and inform the municipality in its future endeavors at the site, CCH was retained to design the rehabilitation of the early 19th century house as a museum. Exterior work included repairing and repainting the front porch, replacing the existing roof, installing new copper gutters and downspouts, replacing the existing window glazing with historic glass and adding an accessible entrance at the front of the house.

To convert the house into a museum, handicap accessible restrooms were added on the first floor, the existing kitchen was refinished with new counters, cabinets, plumbing fixtures, and flooring, and new track lighting was installed in the new exhibit spaces. In addition, the basement was structurally reinforced to accommodate the increase in loads for the building.

Client

Borough of Bergenfield

Program

Historic Structure Repairs, Rehabilitation of Historic House Museum

Cost

$350,000

TUNIS COOPER/MARCHBANK ESTATE

Bergenfield, NJ

View from Entry Drive

View from Mill

Pavillion

PAVILION AT OLD BARRACKS MUSEUM

Trenton, NJ

The Old Barracks Museum had a partially constructed bent pine pavilion. To make the pavilion more useful as a shelter, it was both elongated and raised. Careful consideration was given to the structure to produce an historically appropriate design for this former Revolutionary War encampment. A new cedarshake wood roof was also added.

Today, the pavilion is enjoyed by students and guests alike for picnics and shelter/cover during educational presentations.

Client
Old Barracks Museum

Program
Expanded and Revised Pavilion

Cost
$25,000

PAVILION AT OLD BARRACKS MUSEUM

Trenton, NJ

Pavilion

Pavilion

SECTION 2:
Organizational Chart & Resumes

2.0 ORGANIZATION CHART & RESUMES

DPMC

ARCHITECTURE, HISTORIC PRESERVATION

Clarke Caton Hintz, PC

John D. S. Hatch, FAIA, LEED AP
Principal | Principal-in-Charge

Julie Kroon, AIA
Project Manager

Earl Heim
Project Designer

MEP/FP

Princeton Engineering Group

Michael Berry, PE
Principal | Lead Mechanical Eng

Bryant Domitrowski
Mechanical Engineer

COST ESTIMATING

Becker & Frondorf

Mike Zaidel
Partner of Cost Estimating

Timothy Kenny, RA
Project Estimator

Gianna Rogari
Project Estimator

STRUCTURAL

Harrison-Hamnett, PC

Mark Gaffney, PE
Principal

ARCHAEOLOGY

Hunter Research

Richard Hunter
President | Principal Archaeologist

(Companies with Key Personnel Above the Line)

CIVIL/SURVEY

B&G Engineering

Besrick Plummer, PE
President

EDUCATION

University of Pennsylvania
Certificate in Historic Preservation

University of Virginia
Master of Architecture

Istituto Universitario d'Architettura
Venice, Italy ; UVA Venice Program

Princeton University
Bachelor of Arts

PROFESSIONAL LICENSES

Registered Architect
New Jersey
New York
Pennsylvania

Member, College of Fellows
American Institute of Architects

LEED Accredited Professional
USGBC

AWARDS

Preservation New Jersey Legacy & Leadership Award, 2015

10 NJHPO NJ Historic Preservation Awards
20 City of Trenton Preservation Awards

PROFESSIONAL ACTIVITIES

Trenton Landmarks Commission
1989-Present; Chair, 1992-1995

Preservation New Jersey
Board of Trustees, 2003-2013; President 2008-2009

New Jersey Historic Trust
Board of Trustees, 2003-2015

Princeton Area Community Foundation
Board of Trustees, 2015-2021


1


2

JOHN D. S. HATCH, FAIA, LEED AP

Principal

In his 35 years with Clarke Caton Hintz, John Hatch has managed the design of an array of architecturally significant historic buildings. These include the restoration of Morven, the former governor's mansion in Princeton; the Roebling Complex Re-development; and the restoration of the Hunterdon County Courthouse. In addition to his historic work, he has managed a large number of civic projects and studies, and a wide variety of other projects, including numerous College and University projects, multi-unit and senior citizen housing projects, the Somerset Ballpark, and commercial and government projects. All of his projects address issues of context, civic life and sustainability. In addition to his design work, John has written and lectured about such topics as historic preservation, sustainability and urban redevelopment.

PROFESSIONAL EXPERIENCE

Roebling Mansion Restoration
Trenton, NJ

Princeton Univ. 200 Elm Drive
Princeton, NJ

Cracker Factory/Everett Corner
Trenton, NJ

Historic Morven (1)
Princeton, NJ

Historic Hunterdon County Courthouse (2)
Flemington, NJ

Roebling Complex
Trenton, NJ

Trenton Masonic Temple
Trenton, NJ

Roebling Lofts & Roebling Center
Trenton, NJ

Pellettieri Homes
Trenton, NJ

Trenton Makes Arts Complex,
Trenton, NJ

Hunterdon County Hall of Records
Flemington, NJ

Golden Swan
Trenton, NJ

N. Pemberton Railroad Station
Pemberton, NJ

Millington School House Restoration
Long Hill, NJ

Samuel Fleming House
Flemington, NJ

Garretson Forge & Farm
Fair Lawn, NJ

Webb Memorial Chapel
Madison, NJ

Tunis Cooper Historic Site
Bergenfield, NJ

Trenton Public Library
Trenton, NJ

Museum of Contemporary Science
Trenton, NJ

Mill Hill Historic District
Trenton, NJ

Rogers Locomotive Erecting Shop
Paterson, NJ

Flemington Historic Preservation Commission
Flemington, NJ

City of Burlington Historic Preservation Commission
Burlington, NJ

Thomas Edison State University Center for Learning & Technology
Trenton, NJ

JULIE KROON, AIA, LEED AP

Project Manager

Julie is a recent addition to the Clarke Caton Hintz team. She is a registered architect with over ten years of experience, with a focus on historic preservation. Julie has contributed to a variety of project types, including adaptive reuse, exterior restoration, and new construction. She has proficiency in surveying and preparing existing conditions assessments, construction documents, preservation plans, feasibility studies, 3D computer modeling, graphic presentations, and construction administration.

EDUCATION

Columbia University
Master of Science in Historic Preservation

Virginia Polytechnic Institute
Bachelor of Architecture

PROFESSIONAL LICENSES

Registered Architect
State of New Jersey

American Institute of Architects
Member

LEED Accredited Professional
USGBC

PROFESSIONAL ACTIVITIES

Ewing Township Historic Preservation Commission
Member

National Trust for Historic Preservation
Member

Trenton Historical Society
Member


1

PROFESSIONAL EXPERIENCE

Newark Symphony Hall (1)
Newark, NJ

NJ Taxation Building Adaptive Reuse Feasibility Study
Trenton, NJ

PRIOR EXPERIENCE*

Rocky Hill Firehouse
Rocky Hill, NJ

Union Schoolhouse
Long Valley, NJ

South Orange Village Hall
South Orange, NJ

Drumthwacket Historic Site
Princeton, NJ

Princeton University - Springdale Apartments and Townhomes
Princeton, NJ

The Institute for Advanced Study - Dining Hall
Princeton, NJ

Montclair State University - Susan A. Cole Hall
Montclair, NJ

The Naugle-Vanderbeck House
Fair Lawn, NJ

The Episcopal Church of St. James
Upper Montclair, NJ

Sutfin House
Manalapan, NJ

Cobb-Smith-Baldwin House
Parsippany, NJ

The Present Day Club
Princeton, NJ

Batsto Historic Village
Hammonton, NJ

Rocky Hill Municipal Building
Rocky Hill, NJ

Emlen Physick Estate
Cape May, NJ

Lake Hapatcong Yacht Club
Long Valley, NJ

Hopewell Presbyterian Church
Hopewell, NJ

EARL HEIM

Project Designer

Earl Heim specializes in historic preservation projects at Clarke Caton Hintz, working on a variety of projects ranging from the restoration of significant structures to the adaptive re-use of historic industrial buildings. He has completed the full range of tasks, including conditions assessments, site surveys, historic research, preservation plans, concept designs, construction documentation and construction administration.

EDUCATION

Thomas Jefferson University
Bachelor in Architecture
Minor in Historic Preservation

Mercer County Community College 2018-2019
Student in Architecture

Rowan University 2016-2017
Student in Electrical and Computer Engineering

PROFESSIONAL ACTIVITIES

Member, American Institute of Architects

PROFESSIONAL EXPERIENCE

Hoboken Public Library (1)
Hoboken, NJ

Trenton City Rehabilitation
Trenton, NJ

Belmont Avenue Plaza Restoration - Lincoln Park
Jersey City, NJ

Workforce Family Housing - North Spring Run
Saratoga Springs, NY

Burlington Historic Carriage House Restoration
Burlington, NJ

ACIA NARTP Building 2
Egg Harbor Township, NJ

Hackensack Waterworks - Preservation Plan & Feasibility Study
Oradell, NJ

Conifer - Village Patchoque Renovations
Patchogue, NJ

Former Taxation Building Mixed Use Study
Trenton, NJ

Vanderhoef House Repairs & Improvements
Clifton, NJ

Schulyer-Colfax House Restoration & Rehabilitation
Wayne, NJ

Trenton Public Schools, Harrison Elementary - Elevator/Stairs
Trenton, NJ

Trenton Public Schools-Martin Luther King Middle School - Demolition
Trenton, NJ

PE
GROUP

Princeton Engineering Group, LLC
Consulting Engineers

[redacted]

MICHAEL J. BERRY, P.E., CPD
PRINCIPAL/LEAD MECHANICAL ENGINEER

Education:
B.S. 1996, Drexel University
B.S. Architectural Engineering – Building Mechanical Systems

Chubb Loss Control University, September 2009
- Water Supplies & Sprinkler Systems
- Dry Pipe, Deluge, & Pre-Action Sprinkler Systems
- Automatic Fire Pumps

Registration:
New Jersey Professional Engineer
GE05170000
Michigan Professional Engineer
6201069244

Professional Memberships:
ASPE, Philadelphia Chapter
ASHRAE, Philadelphia Chapter

Mr. Berry's experience includes the design of systems, equipment selection, and preparation of specifications. His projects include plumbing and fire protection systems for new buildings as well as systems for expansion and modification of existing facilities, including historic structures.

Mr. Berry has over 20 years of experience in the design of plumbing, fire protection, mechanical, and electrical systems for commercial, educational, retail, and institutional projects throughout the United States.

Some representative projects are listed below:

Batsto Visitor's Center, Hammonton, NJ
Cedar Bridge Tavern, Barnegat, NJ
John W. Rea House, Hawthorne, NJ
Lambert Castle, Paterson, NJ
John W. Rea House, Hawthorne, NJ
Proprietary House, Perth Amboy, NJ
Dr. James Stills Office, Medford, NJ
Bergen Performing Arts Center, Englewood, NJ
Drumthwacket, Princeton, NJ
East Point Lighthouse. Maurice River Township, NJ
Institute for Advanced Study, Princeton, NJ
- Marquand House Renovations
- Fuld Hall Renovations
- Short Term Academic Housing

Hartley Dodge Memorial, Madison, NJ
Loew's Jersey Theatre – Jersey City, NJ
Iviswold Castle at Felician College, Rutherford, NJ
Ellis Island Recreation Building
Princeton Academy of the Sacred Heart, Princeton, NJ
New Jersey State House Annex, Trenton, NJ
Van Wagenen House, Jersey City, NJ
Trenton Free Public Library, Trenton, NJ
Atlantic City Free Public Library, Atlantic City, NJ
South River Public Library, South River, NJ
Glen Alpin, Harding Twp., NJ
Mt. Kemble Home, Morristown, NJ
Museum of Early Trades & Crafts, Madison, NJ

PE
GROUP

Princeton Engineering Group, LLC
Consulting Engineers

[redacted]

BRYANT M. DOMITROWSKI
MECHANICAL/HVAC ENGINEER

Education:
2014, Villanova University
B.S. Mechanical Engineering

Mr. Domitrowski's experience includes designing HVAC plumbing, and fire protection systems. His projects include design of new buildings, fit out of tenant spaces, and modification of existing facilities.

Mr. Domitrowski has several years' experience in the design of mechanical systems for residential, commercial, and institutional projects throughout the New York City and tri-state area.

Some representative projects are listed below:

Triumph Brewpub, Princeton, NJ

Lambert Castle & Carriage House, Paterson, NJ

Hartley Dodge Memorial Building, Madison, NJ

Mary Etta Cox House, Barnegat, NJ

Frazee House, Scotch Plains, NJ

Harry S. Vreeland House Renovation, Ringwood, NJ

JST Detroit, Farmington Hills, MI

AT&T Labs, Middletown, NJ

AT&T Data Centers, Mid-Atlantic region

304 Mulberry Street Apartments, New York, NY

East Flatbush Public Library, Brooklyn, NY

MIKE ZAIDEL

Partner of Cost Estimating

Professional Experience

Becker & Frondorf, Philadelphia, PA
2006 – Present

Trained as a structural engineer in Israel, Mike Zaidel's approach to estimating is systematic and disciplined. He has produced Estimates for projects such as:

Children's Hospital of Philadelphia – Physicians Bldg, $370 million
Swarthmore College – Athletic Complex Masterplan, $120 million
Lehigh University – Dorm Complex, $110 million
West Chester University – Commons Bldg, $97 million
Vanguard Financial – New Office Bldg, $70 million
Franklin County Judicial Center – Bldgs Complex, $60 million
Rowan University – Engineering School, $47 million
Villanova University – Performing Art Center, $42 million
Lehigh University – New Business School Bldg, $33 million
Statue of Liberty – Life Safety Improvements, $27 million
Korean War Veterans Memorial – Site Improvements, $25 million
Dallas Parkland Hospital – Addition and Renovation, $20 million
Academy of Music – Façade Restoration, $20 million

Sprinturf, Wayne, PA
Project Estimator
2006

Candles & Keepsakes, Lawrenceville, NJ
Business Owner
1990 – 2006

Parsons Construction, Philadelphia, PA
Project Estimator
1989 – 1990

Structural/Civil Engineer, Tel Aviv, Israel
1989 – 1990

Education

Drexel University
Construction Management Certificate Program, 2007

Technion Israel Institute of Technology
Bachelor of Science, Civil Engineering, 1984

TIMOTHY KENNY, RA

Project Estimator

Professional Experience

Becker & Frondorf, Philadelphia, PA
2013 – Present

Tim Kenny trained as an architect which makes him well-suited to represent the client's interests in estimating new construction, expansion and renovation projects. He has produced Estimates for projects such as:

West Chester Univ. Commons, $84 million
UPenn Museum Renovations, $35 million
Rutgers School of Pharmacy, $34 million
NPS Meridian Hill Park Renovations, Phases 5-7, $20 million
PSU Luerssen Building, $12 million
PSU Hazelton Library, $6 million

Building Inspection Underwriters, Inc., Feasterville, PA
Building Inspector/Plans Examiner
2010 – 2013

Meyer Design, Inc., Ardmore, PA
Project Architect/Project Manager
2006 – 2010

Drexel University, Philadelphia, PA
Planning Design & Construction: Project Manager/Designer
1999 – 2006

Education

Drexel University, Department of Architecture
Bachelor of Architecture, 2003

Registered Architect, PA

GIANNA ROGARI

Project Estimator

Professional Experience

Becker & Frondorf, Philadelphia, PA
2021 – Present

Gianna was trained as an architect but found a love for the financial side of construction management. She embraces technological advances in estimating to provide the most up-to-date cost information at a fast pace. Some of her favorite projects are historical renovations to continue their legacy. She has produced Estimates for projects such as:

Penn Quad, $12 million
Ocean County Justice Complex, $86 million
Nemours Specialty Care, $12.4 million
2 Liberty Place, $2.4 million
Saint George Wellness Center, $3.5 million
Rowan University Bunce Hall, $7.1 million

INTECH Construction
Philadelphia, PA
Estimator/ Assistant Project Manager

Paintech
Conshohocken, PA
Estimator

Kay and Sons
Norristown, PA
Assistant Project Manager

Scungio
Camden, NJ
Assistant Project Manager

Education

Bachelor of Science, Architectural Studies, 2015

Coursework completed in Construction Management, 2016

Mark W. Gaffney, P.E.
Principal

EDUCATION	Drexel University – Philadelphia, PA *Bachelor of Science – Architectural Engineering* *Bachelor of Science – Civil Engineering*
CERTIFICATION	Professional Engineer – *New Jersey, Pennsylvania* LEED Accredited – *Professional*
EXPERIENCE	Mark joined Harrison-Hamnett, P.C. in 1995 and became a principal of the firm in 2009. He maintains 27 years of experience in the engineering field and 32 years in the construction industry. As a project engineer, Mark manages each structural engineering project from conception through project completion including analysis, design and construction coordination. Mark has experience with all types of facilities, both new and renovated, but has a special interest in historic preservation and theater projects. He also conducts structural investigations, surveys and field inspections.
RELEVANT PROJECT EXPERIENCE	Monmouth County Human Services Building Monmouth County Special Services Building Franklin Township B&G Building Hughes Justice Center Renovations Union City 7-9 School Plainfield Elementary School Camden High School Red Bank High School Maintenance Building New Jersey Training School for Boys Lansdale Borough Hall Blairstown Municipal Building

Richard W. Hunter
PRESIDENT

Patrick Harshbarger
VICE PRESIDENT

James S. Lee
VICE PRESIDENT

Patricia A. Madrigal
VICE PRESIDENT

RICHARD W. HUNTER
President/Principal Archaeologist, Ph.D., RPA

EDUCATION

Ph.D., Geography, Rutgers University, New Brunswick, New Jersey, 1999.
Dissertation Title: *Patterns of Mill Siting and Materials Processing: A Historical Geography of Water-Powered Industry in Central New Jersey*

M.A., Archaeological Science, University of Bradford, England, 1975

B.A., Archaeology and Geography, University of Birmingham, England, 1973

EXPERIENCE

1986-present — President/Principal Archaeologist
Hunter Research, Inc., Trenton, NJ

Founder and principal stockholder of firm providing archaeological and historical research, survey, excavation, evaluation, report preparation, historic exhibit development and public outreach services in the Northeastern United States. Specific expertise in historical and industrial archaeology (mills, iron and steel manufacture, pottery manufacture), historical geography, historic landscape analysis, historic interpretive design and public outreach products. Participation in:

- Project management, budgeting and scheduling
- Proposal preparation and client negotiation
- Hiring and supervision of personnel
- Supervision of research, fieldwork, analysis and report preparation
- Historic exhibit development, popular and academic publications and public presentations

1999-2004 — Faculty Member, Certificate in Historic Preservation
Office of Continuing Education, Drew University, Madison, NJ

Courses: The Role of Archaeology in Preservation
25 Years of Public Archaeology in New Jersey

1983-1986 — Vice-President/Archaeologist
Heritage Studies, Inc., Princeton, NJ

Principal in charge of archaeological projects. Responsibilities included:

- Survey, excavation, analysis, and reports
- Client solicitation, negotiation, and liaison
- Project planning, budgeting, and scheduling
- Recruitment and supervision of personnel

1981-1983 — Principal Archaeologist
Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, NJ

Directed historical and industrial archaeological work on major cultural resource surveys and mitigation projects in the Mid-Atlantic region. Primary responsibility for report preparation and editing.

[redacted]

1979-1981 Archaeological Consultant, Hopewell, NJ

1978-1981 Adjunct Assistant Professor, Department of Classics and Archaeology, Douglass College, Rutgers University, NJ

1978-1979 Research Editor
Arete Publishing Company, Princeton, NJ

Prepared and edited archaeological, anthropological, and geographical encyclopedia entries (*Academic American Encyclopedia*, 1980).

1974-1977 Archaeological Field Officer
Northampton Development Corporation, Northampton, England

Supervised archaeological salvage projects executed prior to development of the medieval town of Northampton (pop. 230,000).

Experience included:

- Monitoring of construction activity
- Supervision of large scale urban excavations
- Processing of stratigraphic data and artifacts
- Preparation of publication materials

1969-1970 Research Assistant
Department of Planning and Transportation, Greater London Council

SPECIAL SKILLS AND INTERESTS

- water-powered mill sites
- canals and urban water powers
- iron and steel manufacture
- pottery manufacture
- historic cartography
- scientific methods in archaeology
- historic sites interpretation and public outreach

SELECTED PUBLICATIONS

"New York's Urban Archaeology. The Forts Landscape Reconstruction Project: Central Park's Revolutionary War Forts." *Archaeological Institute of America, New York Society News*, Winter 2015:6-8.

Sartori to Sacred Heart: Early Catholic Trenton. Sacred Heart Church [2014] (with Patrick Harshbarger).

"Historical Archaeology in Trenton: A Thirty-Year Retrospective." In *Historical Archaeology of the Delaware Valley, 1600-1850*, edited by Richard Veit and David Orr. University of Tennessee Press, Knoxville, Tennessee [2013] (with Ian Burrow).

"A Sugar Bowl of William Young & Sons or William Young's Sons." *Trenton Potteries* 13 (1):1-3 [2013].

"Internal Oxidation of Cast Iron Artifacts from an 18th-century Steel Cementation Furnace." *Journal of Archaeological Science* XXX, 1-8 [2012] (with Colin Thomas and Robert Gordon).

"Steel Away: the Trenton Steel Works and the Struggle for American Manufacturing Independence." In *Footprints of Industry: Papers from the 300th Anniversary Conference at Coalbrookdale, 3-7 June 2009*, edited by Paul Belford, Marilyn Palmer and Roger White. *BAR British Series* 523 [2010] (with Ian Burrow).

"Early Milling and Waterpower." In *Mapping New Jersey: An Evolving Landscape*, edited by Maxine N. Lurie and Peter O. Wacker, pp. 170-179. Rutgers University Press [2009].

"On the Eagle's Wings: Textiles, Trenton, Textiles, and a First Taste of the Industrial Revolution." *New Jersey History* 124, Number 1, 57-98 [2009] (with Nadine Sergejeff and Damon Tvaryanas).

"The Historical Geography and Archaeology of the Revolutionary War in New Jersey." In *New Jersey in the American Revolution*, edited by Barbara J. Mitnick, pp.165-193. Rutgers University Press [2005] (with Ian C.G. Burrow).

"Lenox Factory Buildings Demolished." *Trenton Potteries* 6 (2/3):1-9 [2005].

Fish and Ships: Lamberton, the Port of Trenton. New Jersey Department of Transportation and Federal Highway Administration [2005] (28-page booklet).

Power to the City: The Trenton Water Power. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet).

Rolling Rails by the River: Iron and Steel Fabrication in South Trenton. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet).

Quakers, Warriors, and Capitalists: Riverview Cemetery and Trenton's Dead. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet) (with Charles H. Ashton).

"Keeping the Public in Public Archaeology." In: *Historic Preservation Bulletin*, pp. 6-9. New Jersey Department of Environmental Protection, Division of Parks and Forestry, Historic Preservation Office [2004].

"A Coxon Waster Dump of the Mid-1860s, Sampled in Trenton, New Jersey." In: *Ceramics in America*, edited by Robert Hunter, pp. 241-244. University Press of New England [2003] (with William B. Liebeknecht and Rebecca White).

"The Richards Face – Shades of an Eighteenth-Century American Bellarmine." In: *Ceramics in America*, edited by Robert Hunter, pp. 259-261. University Press of New England [2003] (with William B. Liebeknecht).

"The Pottery Decorating Shop of the Mayer Arsenal Pottery Company." *Trenton Potteries* 4(2):1-7 [2003].

"Minutes of the Potters Union (Part 2)." *Trenton Potteries* 4(1):1-5 [2003].

"Minutes of the Potters Union (Part I)." *Trenton Potteries* 3(4):1-5 [2002].

"Eighteenth-Century Stoneware Kiln of William Richards Found on the Lamberton Waterfront, Trenton, New Jersey." In: *Ceramics in America*, edited by Robert Hunter, pp. 239-243. University Press of New England [2001].

"William Richards' Stoneware Pottery Discovered!" *Trenton Potteries* 1(3):1-3 [2000]. Reprinted in *Bulletin of the Archaeological Society of New Jersey* 59:71-73 [2004].

"Trenton Re-Makes: Reviving the City by the Falls of the Delaware." *Preservation Perspective* XVIII (2): 1, 3-5 [1999]

"Mitigating Effects on an Industrial Pottery." *CRM* 21(9):25-26 [1998] (with Patricia Madrigal).

From Teacups to Toilets: A Century of Industrial Pottery in Trenton, Circa 1850 to 1940, Teachers Guide sponsored by the New Jersey Department of Transportation, 1997 (with Patricia Madrigal and Wilson Creative Marketing).

"Pretty Village to Urban Place: 18th Century Trenton and Its Archaeology." *New Jersey History*, Volume 114, Numbers 3-4, 32-52 [Fall/Winter 1996] (with Ian Burrow).

Hopewell: A Historical Geography. Township of Hopewell [1991] (with Richard L. Porter).

"Contracting Archaeology? Cultural Resource Management in New Jersey, U.S.A." *The Field Archaeologist* (Journal of the Institute of Field Archaeologists) 12, 194-200 [March 1990] (with Ian Burrow).

"American Steel in the Colonial Period: Trenton's Role in a 'Neglected' Industry." In *Canal History and Technology Proceedings* IX, 83-118 [1990] (with Richard L. Porter).

"The Demise of Traditional Pottery Manufacture on Sourland Mountain, New Jersey, during the Industrial Revolution." Ch. 13 in *Domestic Potters of the Northeastern United States, 1625-1850.* Studies in Historical Archaeology, Academic Press [1985].

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists (RPA) [formerly Society of Professional Archeologists]
(accredited 1979; certification in field research, collections research, theoretical or archival research)
Preservation New Jersey (Board Member, 1994 - 2003)
New Jersey State Historic Sites Review Board (Member, 1983 -1993)
Society for Historical Archaeology
Society for Industrial Archaeology
Society for Post-Medieval Archaeology
Historical Metallurgical Society
Council for Northeast Historical Archaeology
Professional Archaeologists of New York City
Archaeological Society of New Jersey (Life Member; Fellow, 2011)

OTHER AFFILIATIONS

Mercer County Cultural & Heritage Commission (Commissioner, 2011 – present)
Trenton Downtown Association (Board Member, 1998 – present; Board Chair, 2007 - 2008)
Trenton Museum Society, (Trustee, 2011 – present)
Hopewell Township Historic Preservation Commission (Member, 1998 - 2006; Chair 2003 - 2004)
Hopewell Valley Historical Society (Trustee, 2014 – present)

SECTION 3:
Key Team Members Project Experience Data Sheet

KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Principal

FIRM Clarke Caton Hintz, PC

Lambert Castle - Conditions Assesment, Feasibilty Study and Restoration $6.8 Million	CCH	SD-DD	Principal-in-Charge	12	20%	2018 - 2022	County of Passaic [redacted] Director Department of Cultural & Historic Affairs [redacted]
Hoboken Public L brary Capital Improvements Hoboken, NJ $7.1 Million	CCH	Master Plan, SD-DD	Principal-in-Charge	19	20%	2017 - 2022	Hoboken Public Library [redacted]
John W. Rea House Historic Restoration Hawthorn, NJ $2 Million	CCH	SD-CD	Principal-in-Charge	12	20%	2017 - 2019	County of Passaic [redacted]
Wicoff House Plainsboro, NJ $2 Million	CCH	Preservation Plan, Master Plan, SD - CA	Principal-in-Charge	48	20%	2016 - 2018	Plainsboro Twp. [redacted]
Washington Crossing Visitor Center Master Plan, Titusville, NJ	CCH	Study	Principal-in-Charge	7	25%	2018 - 2019	DPMC [redacted] Asst. Deputy Director [redacted]
East Trenton Public Library 701 North Clinton Avenue, Trenton, NJ $3.54 Million	CCH	SD - CD	Principal-in-Charge	18	20%	2021-2023	NJ Communituy Capital; Christopher Giametta, Dir. of Constr.; [redacted]
Garretson Forge & Farm Fairlawn, NJ $500,000	CCH	SD - CD	Principal-in-Charge	12	20%	2022 - 2023	Bergen Cty Dept of Parks Adam Strobel, Director [redacted]

* A KEY TEAM MEMBER IS A TECHNICAL OR MANAGEMENT PERSON DEVOTING 20% OR MORE OF THEIR TIME TO ANY PHASE OF THE PROJECT

KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Project Manager

FIRM Clarke Caton Hintz, PC

Newark Symphony Hall Newark, NJ $11.6 Million Est.	CCH	Preservation Plan Schematic Design	Project Manager	1	90%	10/2023 - Current	Neark Symphony Hall [redacted]
Montclair State University- Cole Hall Montclair, NJ	HMR Architects	Programming through CA, Leed Certification	Architectural Staff	70	75%	2014 - 06/21	Montclair State [redacted]
Emlen Physick Estate Cape May, NJ	HMR Architects	Site Management Plan, Design CA, Conditions Assessment	Preservation Architect	33	40%	2015, 2021 - 09/23	Cape May MAC [redacted]
Rocky Hill Municipal Building Rocky Hill, NJ	HMR Architects	SD - CA	Project Manager	24	30%	2014 - 09/23 (multi-phases)	Borough of Rocky Hill [redacted]
Hopewell Presbyterian Church-Sanctuary Renovation Hopewell, NJ	HMR Architects	Study through CA	Project Manager	30	70%	03/21 - 06/23	Hopewell Presbyterian Church [redacted]
Barclay Farmstead Cherry Hill, NJ	HMR Architects	SD - CA	Project Manager	24	25%	07/20 - 10/21 04/22 - 06/23	Township of Cherry Hill [redacted]
St. James Episcopal Church Montclair, NJ	HMR Architects	SD-CA	Project Manager	21	25%	08/16 - 09/22 (multi-phases)	St. James Episcopal Church [redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Project Designer

FIRM Clarke Caton Hintz, PC

Trenton City Hall Plaza Rehabilitation Trenton, NJ $151,855.00	CCH	SD-CD	Project Designer	2	60%	08/23 - 10/23	City of Trenton, Project Manager [redacted]
Belmont Avenue Plaza Restoration Jersey City, NJ $14,900.00	CCH	SD-CD	Project Designer	2	70%	08/23 - 10/23	Hudson County Office of Grants Admin. [redacted]
Burlington Historic Carriage House Restoration Burlington, NJ $20,550.00	CCH	SD-CD	Project Designer	1	70%	07/23 - 08/23	Dept. of Housing and Community Development [redacted]
Preservation Plan Hackensack Water Oradell, NJ $112,830.00	CCH	SD, Preservation Plan	Project Designer	5	60%	05/23 - 10/23	Bergen County Dept. of Parks [redacted]
Feasibility Study Former Taxation Building Trenton, NJ $279,990.00	CCH	Study	Project Designer	3	60%	06/23 - 09/23	CCRC [redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Mechanical Engineer

FIRM Princeton Engineering Group

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Restoration and Rehabiliatoin of the Clifton Musuem at the Vreeland House Clifton, NJ $1,340,000	Princeton Engineerng Group, LLC	Conditions Assesment and design of Mechanical and Electrical improvements	Principal In Charge / Project Manager/ Mechanical Engineer	8	10	2022-2022	Passaic County [redacted]
William Trent House HVAC Upgrades, Trenton, NJ $532,000	Princeton Engineering Group, LLC	Design for replacement of the existing chilled water/steam HVAC System including humidification and dehumidification.	Principal in Charge	12	5	2023-Present	William Trent House Museum [redacted]
Restoration and Rehabiliatoin of Lambert Castle Paterson, NJ $4,800,000	Princeton Engineering Group, LLC	Design of mechanical and electrical improcements.	Mechanical Engineer	30	15	2019-2022	Passaic County [redacted]
Hartley Dodge Memorial East Wing Renovation Madison, NJ $4,300,000	Princeton Engineering Group, LLC	Design for renovation of East Wing of historic building, including conversion of historic courtroom to museum.	Principal In Charge / Project Manager / Mechanical Engineer	8	20	2022 - Present	Historic Building Architects [redacted]
Drumthwacket HVAC System Replacement, Princeton, NJ $1,458,000	Princeton Engineering Group, LLC	HVAC Design and Construction	Mechanical Engineer	8	10	2011-2012	NJ DPMC [redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Mechanical Engineer

FIRM Princeton Engineering Group

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Dey Mansion Washington's Headequarters - HVAC Repair Wayne, NJ $188,000	Princeton Engineerng Group, LLC	Design of HVAC improvements including humidity control and controls upgrades	Mechanical Engineer	14	10	2021-2022	Passaic County [redacted]
Restoration and Rehabiliatoin of the Carriage House at Lambert Castle Paterson, NJ $4,800,000	Princeton Engineering Group, LLC	Design of mechanical and electrical improcements	Mechanical Engineer	24	10	2020 - Present	Passaic County [redacted]
Hartley Dodge Memorial East Wing Renovation Madison, NJ $4,300,000	Princeton Engineering Group, LLC	Design for renovation of East Wing of historic building, including conversion of historic courtroom to museum.	Mechanical Engineer	6	20	2023 - Present	Historic Building Architects [redacted]
Harry S. Vreeland House Renovation Ringwood, NJ $1,565,000	Princeton Engineering Group, LLC	Design for replacement of mechanical and electrical systems	Mechanical Engineer	4	10	2023-Present	Passaic County [redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Principal

FIRM Harrison-Hamnett, P.C.

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
NJ Training School for Boys DPMC #S0520-00 Jamesburg, NJ $600,000	Princeton Engineering Group	Structural Alterations for System Upgrades	Principal-in-Charge	3	20	2009-2017	Princeton Engineering [redacted]
NJ State Museum DPMC #A1115-00 Trenton, NJ	Schiller & Hersh	Structural Alterations to Enable HVAC System Upgrades	Principal-in-Charge	3	15	2011-2012	Schiller & Hersh [redacted]
Motor Vehicle Commission DPMC#T0445-01 Bakers Basin, NJ	The Spiezle Architectural Group	New Agency Building, Service Core Building & Road Test Field House & misc.	Principal-in-Charge	10	30	2009-2012	The Spiezle Architectural Group [redacted]
Warren Co. Residential Home Boiler Replacement DPMC#S0551-00	M&E Engineers	Structural Alterations for Boiler Replacement	Principal-in-Charge	4	20	2012-2013	M&E Engineers [redacted]
Double Wide Modular Office Trailer Installation T0545-00 Sayreville,	McAuliffe + Carroll	Foundation Design	Principal-in-charge, Project Engineer	14	20	2015	McAuliffe + Carroll [redacted]
Exterior Envelope, Window & HVAC Upgrades @ DOT Sayreville Yard T0515-00	McAuliffe + Carroll	Repair, Renovation, & Structural Evaluation	Principal-in-charge, Project Engineer	21	20	2014-2015	McAuliffe + Carroll [redacted]
Winslow & Assunpink Storage Sheds P1102-00	McAuliffe + Carroll	Construction/Design Administration	Principal-in-charge	20	5	2014-2016	McAuliffe + Carroll [redacted]

KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Principal

FIRM Harrison-Hamnett, P.C.

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Hughes Center UPS Upgrade A1191-00 Trenton, NJ	McAuliffe + Carroll	Construction/Design Administration	Principal-in-charge	21	5	2014-2016	McAuliffe + Carroll [redacted]
NJDOT Bedminster Maintenance Yard DPMC #T0536 Bedminster, NJ $2.6M	JZA+D	Structural Alterations for Window & Façade Installation	Principal-in-Charge	7		2015-2016	JZA+D [redacted]
Vineland Prep. DPMC #S0575 Vineland, NJ $425,000	Schiller & Hersh	Structural Alterations for Emergency Generator Replacement	Principal-in-Charge	3	15	2014	Schiller & Hersh [redacted]
Johnstone Campus Generator DPMC #S0567 $200,000	Schiller & Hersh	Structural Alterations for Emergency Generator Replacement	Principal-in-Charge	2	15	2014	Schiller & Hersh [redacted]
Lincoln Fire Protection Upgrades DPMC #M1450 Trenton, NJ $2M	Schiller & Hersh	Structural Alterations for Fire Protection Upgrades	Principal-in-Charge	2	20	2013-2014	Schiller & Hersh [redacted]

KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE President

FIRM Hunter Research, Inc.

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Petty's Run, Capital State Park, City of Trenton, Mercer County, NJ $967,500	WRT Design	Archaeological Explorations and Historic Interpretive Design	Principal	60	20%	July 2008 - May 2014	NJDEP, [redacted] Project Manager [redacted]
Batsto Mansion Geothermal Renovations, Batsto Village, Washington Township, Burlington County, NJ $49,754	M&E Engineers, Inc.	Phase I and II Archaeological Investigations, Archaeological Monitoring	Principal	12	20%	November 2020 - June 2022	[redacted], Inc. William Amman, PE [redacted]
Taxation Building, City of Trenton, Mercer County, NJ $181,800	Ballinger	Cultural Resources Investigations	Principal	30	20%	May 2017 - February 2020	Ballinger [redacted]
Health and Agriculture Buildings, City of Trenton, Mercer County, NJ $124,000	HDR	Cultural Resources Investigations	Principal	58	20%	April 2017 - March 2022	HDR [redacted]
Walt Whitman House, City of Camden, Camden County, NJ $12,900	Lammey + Giorgio	Phase I Archaeological Survey	Principal	3	20%	July 2018 - September 2018	Lammey + Giorgio [redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Partner

FIRM Becker & Frondorf

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Villanova University New Library Building - $115M	RAMSA Architects	Cost Estimating	Principal Estimator	3 Weeks	100%	Feb-23	RAMSA Architects; [redacted]
Downingtown HS East - $20M	KCBA Architect	Cost Estimating	Principal Estimator	2 Weeks	100%	Nov-23	[redacted]
Villanova University New Engineering Building - $85M	RAMSA/BLTa	Cost Estimating	Principal Estimator	3 Weeks	100%	Feb-21	RAMSA Architects; [redacted]
University of Pennsylvanya Quad - $160M	Beyer Blinder Belle Architects and Planners	Cost Estimating	Principal Estimator	4 Weeks	100%	May-21	[redacted]
Indian Mountain School - $6M	VMA Architects	Cost Estimating	Principal Estimator	2 Weeks	25%	Feb-23	[redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Senior Estimator

FIRM Becker & Frondorf

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Temple University Public Health Building - $140M	PZS Architects	Cost Estimating	Sr. Estimator	1 Month	100%	Aug-22	PZS Architects; [redacted]
Berkshire School Student Center - $33M	VMA Architects	Cost Estimating	Sr. Estimator	2 Weeks	100%	Nov-22	[redacted]
St. George School Dorms - $24M	VMA Architects	Cost Estimating	Sr. Estimator	3 Weeks	100%	Oct-22	[redacted]
SJU New Student Residence - $114M	BHA Architects	Cost Estimating	Sr. Estimator	3 Weeks	50%	Feb-23	[redacted]
SJU Kinney Center - $15M	VMA Architects	Cost Estimating	Sr. Estimator	2 Weeks	100%	Mar-23	[redacted]

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KEY TEAM MEMBER PROJECT EXPERIENCE DATA SHEET

NAME [redacted]

TITLE Project Estimator

FIRM Becker & Frondorf

PROJECT TITLE LOCATION AND TOTAL CONSTRUCTION COST OR FEE	A/E OF RECORD FOR THIS REFERENCED PROJECT	SPECIFIC TYPE OF WORK EXPERIENCE (STUDY, SCHEMATIC, CONSTRUCTION ADMINISTRATION)	TEAM MEMBERS SPECIFIC ROLE OR TITLE ON THE REFERENCED PROJECT	DURATION OF TEAM MEMBER'S INVOLVEMENT OF THE REFERENCED PROJECT (IN MONTHS)	% OF TIME DURING DURATION BASED UPON A 40 HOUR WEEK	DATES OF THE TEAM MEMBER'S INVOLVEMENT IN THE REFERENCED PROJECT	CLIENT NAME CONTRACT PERSON AND PHONE NUMBER
Lackawanna Trail Rec & Wellness Center - $4M	HC Architects	Cost Estimating	Estimating	2 Weeks	100%	Mar-23	HC Architects; [redacted]
SJU New Student Residence - $114M	BHA Architects	Cost Estimating	Estimating	3 Weeks	50%	Feb-23	[redacted]
Falls Township Building - $20M	IEI Group	Cost Estimating	Estimating	2 Weeks	100%	Nov-22	[redacted]
TCNJ Roscoe Hall Student Services - $3M	NORR	Cost Estimating	Estimating	2 Weeks	100%	Dec-22	[redacted]
Indian Mountain School - $6M	VMA Architects	Cost Estimating	Estimating	2-Weeks	75%	Feb-23	[redacted]

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SECTION 4:
Project Key Personnel List

KEY PERSONNEL LIST

FIRM NAME	KEY PERSONNEL & TITLE	SCHEMATIC DESIGN PHASE	DESIGN DEVELOPMENT PHASE	FINAL DESIGN PHASE	PERMIT APPLICATION PHASE	BIDDING AND CONTRACT AWARD	CONSTRUCTION PHASE	PROJECT CLOSE-OUT PHASE	HOURLY WAGE LEVEL 1-7
Clarke Caton Hintz, PC	[redacted], LEED AP Principal-in-Charge	20	10	10	5	5	5	5	7
Clarke Caton Hintz, PC	[redacted] Project Manager	40	40	20	5	5	20	10	5
Clarke Caton Hintz, PC	[redacted] Project Designer	40	40	50	10	10	10	20	3
Princeton Engineering Group, LLC	[redacted] Principal in Charge, Project Manager, Lead Mechanical Engineer	20	20	12	1	1	3	1	7
Princeton Engineering Group, LLC	[redacted]	20	32	17	50	6	32	14	5
Harrison-Hamnett, PC	[redacted]., Principal (Structural)	15	15	25	0	0	20	5	7
Hunter Research, Inc.	[redacted] (Archaeology)		20						7
Becker & Frondorf	[redacted] - Partner/Cost Estimating		20						7
Becker & Frondorf	[redacted] - Senior Estimator		20	20					5
Becker & Frondorf	[redacted] Project Estimator		20	20					4

INSERT THE WAGE LEVEL FROM 1 TO 7 OF EACH KEY PERSON. **DO NOT INSERT ANY HOURLY RATE**

SECTION 5:
Project Approach

5.0 PROJECT APPROACH

Introduction:

The Old Barracks Museum in Trenton was originally constructed in 1758 to house British colonial troops during the French and Indian War. It is the last remaining colonial barracks in the country and is designated as a National Historic Landmark. In addition, it played a significant role in the First Battle of Trenton. It is one of the key sites for our 250th celebration!

The Clarke Caton Hintz (CCH) team is particularly interested in and familiar with the site as we are located directly across the street from it and have provided services to the Old Barracks previously.

The work identified in the RFP addressing HVAC upgrades is particularly important as the current issues negatively impact museum operations and limit what types of artifacts can be displayed. As one of the most significant Revolutionary War sites in New Jersey and in the country, making these improvements is particularly important as we approach the nation's 250th anniversary in 2026.

Architectural Approach:

CCH will be responsible for the overall architectural design services and management of the entire design team for the duration of the project. CCH will ensure that the project and all its components meet all building code requirements, as well as the Secretary of the Interior's Standards for the Treatment of Historic Properties and the requirements of the Division of Property Management and Construction. The entire team has extensive experience in design coordination and Project Authorization through the NJ Historic Preservation Office.

As Architects for the project, we will provide the Division of Property Management and Construction, staff and other users with a finished project that exceeds your expectations. Our firm's wide range of

historic preservation experience has enabled us to distill the complex and divergent requirements into elegant solutions and to ensure that small projects are handled with identical proficiency to the largest.

Continuity between design and construction along with adequate site supervision are very beneficial to a project's successful completion. By having the staff that assembled the contract drawings administer the construction, CCH ensures that no disconnect occurs between the office and the field. This integrated approach has allowed our office to successfully manage the most sensitive projects. The fact that two of the firms involved in the project, CCH and Hunter Research, have their offices across the street and around the corner, respectively, and the others are close by, means that the team can address construction issues quickly and efficiently.

We have adjusted the project schedule and indicated some potential concerns, particularly during construction as this is a complicated project that includes sitework, difficult access to an operating museum and potentially long-lead HVAC equipment.

The fundamental philosophy guiding all of our preservation projects is centered on preserving the most important character-defining features of the resource, while adding needed systems or features that do not detract from the experience of the resource, and without permanent damage. In this project, where we are addressing code issues, some of which may have an impact on the floor plan and how one moves through the building, the goal is to have minimal negative impact on the House itself and its historic features while being attractive, functional, sustainable and long-lasting. CCH's role is to facilitate changes that enhance and enrich the building's historic character

New systems will need to impact the exterior of the building as little as possible.

and design unity, rather than diminishing or detracting from them. Our extensive experience and expertise ensures that any alterations will become a harmonious part of the overall site.

Historic Preservation design at its best is a highly collaborative process. We believe the most successful projects are the result of a strong team approach. It may seem obvious, but unfortunately we have heard from too many clients a sense of frustration with designers that arrive with preconceived notions, pursue personal design agendas, or simply fail to listen. It has always been our experience that our most successful and rewarding projects are a true collaboration and sharing of ideas and experiences. This begins with our best planning tool: Our commitment to listening. Throughout the process, we will strive to understand the goals, specific directives, detailed requests and functional necessities of the owners, users and operators of the Old Barracks. We will then directly respond with ideas, plans and options that are insightful, and that thoughtfully respond to the information conveyed to us. In this way, we ensure that the client team is pleased with the solutions that are developed.

Our mission is very simple: To provide you with the tools at every stage of this project to make intelligent, educated and defensible decisions in allocating the precious financial resources of the State.

The entire CCH design team is ready to hit the ground running. We have all done extensive restoration work and can begin work as soon as authorized. Having worked with the Department of Property Management and Construction on numerous occasions, we are familiar with all DPMC published guidelines for Architectural Services and with your procedures.

The bulk of this project is the design of the new/ upgraded HVAC system. CCH's specific design work will be to coordinate how this system is inserted into this National Historic Landmark in the most efficient, least damaging and unobtrusive way possible. We will work closely with the MEP/ FP engineer, Princeton Engineering Group, and our structural engineer, Harrison-Hamnett, to select the right system for this sensitive project; to design how the existing system is removed and the new system installed; and to appropriately design the repairs to the existing structure and finishes. Following is a more detailed description of the MEP/ FP design approach.

MEP/ FP Engineering Approach:

The Princeton Engineering Group (PEG) has extensive experience as both a prime and sub-consultant on DPMC projects. We believe that this is adequate indication that we understand the requirements of DPMC projects.

Therefore, rather than itemize the routine required tasks from the RFP, we will speak to some of the particular issues which must be addressed to assure a successful outcome for the HVAC improvements at the Old Barracks Museum.

1. A major challenge of installing modern mechanical and electrical systems in historic structures is the requirement that historic materials remain as intact as possible.

2. The environmental control must be designed with both the building and its contents in mind. Sensitive furnishings and art often have different requirements from the structure itself.

3. The nature of the occupancy requires that the HVAC system be quiet. This is likely one of the reasons the pump house was created for the existing chilled and hot water systems.

4. Proper air quality must be maintained. Excessive airborne particulates can exacerbate respiratory conditions in occupants as well be detrimental to the interior finishes and furnishings.

5. Equipment and systems must be selected to maximize efficiency within the parameters of the construction cost. The NJUCC grants exceptions to energy code requirements for existing and historic buildings under the Rehabilitation Subcode, but every effort should be made to optimize energy performance.

6. A major focus must be on reliability of operations. Related to this issue would be the requirement that equipment be selected for reliability and ease of maintenance.

Having worked on many similar structures, the project team is sensitive to the particular requirements of this building type. Our approach to addressing these issues is given below, generally in the order required by the chronological sequence of the design and construction phases.

System Selection

The systems which are currently existing appear to have been installed in phases over the course of approximately six to seven years. The heating and cooling systems are provided with hot and chilled water from the district system operated by Veolia (formerly TDEC). Based on the existing drawings the fan coil units are served by a two-pipe hot and chilled water system which requires a changeover in the spring and fall. There also appears to be second chilled water loop which may be able to operate continuously throughout the year. This second loop supplies the existing dehumidifiers. The air handling unit located in the attic appears to have a cooling coil connected to the second chilled water loop, however, it also has another coil connected the main heating/cooling loop. In addition, to the hydronic systems there are a number of electric unit heaters located throughout the building along with an electric duct heater for the outdoor air intake.

Humidification is provided by steam humidifier which injects steam into the ducted air stream.

Please note further investigation of the existing systems will be required to verify the above-mentioned understanding of the existing systems.

The basic type of terminal equipment will at least partially be determined by the existing HVAC distribution. The present air supply and return openings, especially in spaces designated as having high levels of historic significance, would preferentially be left in place, unless improvements can be made which would not adversely affect historic finishes.

It is likely that the upgrades would retain the basic chilled and hot water distribution concept. However, the new system will be a true four pipe system. To accomplish this proposed system the fan coil units and air handling unit will need to be replaced. Additional piping will need to be introduced to the building and it appears changes to the supply and return system from Veolia will be required. The pipe routing within the building would follow the current paths as much as possible, however, accessing this piping may become invasive requiring opening and repairing finishes. The existing drawings indicate that main piping in the basement is routed under the floor through most of the building. This would indicate in this area of the building that there is likely inadequate ceiling space to route the piping overhead.

Existing fan coil units would likely be replaced with a similar unit designed for inclusion in a four-pipe system. This would help minimize the disturbance within the building.

A modern air handling unit with direct drive motors instead of belt driven motors will be reviewed and designed based on the space constraints and environmental requirements of the space served. If a custom or semi-custom unit is required to work with the available space this may impact lead times for equipment. Whether this unit is custom or more standard equipment, this unit will likely be the longest lead item, possibly seeing a twelve-to-sixteen-week lead.

We are recommending an allowance for ultrasonic pipe testing. This testing would help determine if the existing piping in the building is suitable for re-use or is in need of replacement. Re-using the existing piping where possible would keep construction costs down. On the other hand we don't want to leave piping in place that may be on its way to imminent failure as well.

A possible alternative to a four-pipe system may be to utilize the two-pipe system as a condenser water system for water source heat pumps. This system may avoid adding piping to the building and eliminating the summer and winter changeover. However, the system inside the building may become louder due to adding compressors inside the building. It also may require more modifications to the air distribution systems in the building. In many cases the equipment may be larger or a different configuration than the existing systems.

We could also explore other systems such as a VRF (Variable Refrigerant Flow) system. However, these would require adding more equipment either in the building or outside the building on grade. Adding exterior equipment would detract from the historical significance of this site. This system would also lead to removing the building from the district energy system and requiring upgrades to the electrical service.

Energy Optimization Measures

Working with an historic structure can limit energy saving opportunities. Since the heating and cooling sources are provided by a district system, the opportunities are further reduced. However, incorporating new equipment and control schemes may improve the energy efficiency of the HVAC systems.

The design of the new HVAC system at the Old Barracks Museum will need to deal with tight spaces, historic fabric and existing structure.

CCH designed the interior and exterior of the Millington Schoolhouse/ Old Town Hall, including the restoration of the masonry foundations, interior ADA restrooms, new building systems, including life safety, and transforming the building for multiple uses (museum and offices)

The terminal controls devices and circulating pumps will be replaced. The new circulating systems will incorporate variable speed pumps and two-way control valves to minimize energy consumption.

Zoning for temperature control will be carefully assessed so as to allow temperature setback in unoccupied portions of the building. We will specify a modern digital controls system which would allow control strategies such as occupancy sensors, time of day scheduling and interface with lighting.

Air Quality

Several factors affect air quality, most of which can be addressed through the HVAC system. The existing system includes steam humidifiers for winter humidification. We will work with facilities staff and Clarke Caton Hintz to determine desired humidity levels for protection of occupants and the contents of the house from excessive dryness. If humidification is desired, we recommend continued use of a steam type humidifier rather than evaporative type. Steam humidifiers reduce the risk of growth of pathogens by ensuring sterilized vapor in the air stream.

A concern with humidification in an historic building is the risk of condensation within building walls. The lack of insulation and inability to apply proper vapor barriers to decorative interior surfaces poses the risk that dew point temperature may be reached within the wall cavity. This is a particularly harmful condition in that long term damage can proceed unseen.

Another concern about the existing humidification system is that improper control may allow condensation within the ductwork. The presence of liquid moisture can promote growth of mold which would be introduced into the air stream. The second requirement for mold growth is dirt; this can be introduced by air flow through inadequate filters. Reduction of particulates in the air stream can be addressed through mechanical filtration. Minimum MIRV 13 filtration is recommended.

It is important that any existing ductwork which is to remain be internally cleaned to eliminate any existing deposits.

Permit Requirements and Prior Approvals

Aside from NJUCC forms and the SHPO application, we do not foresee any other permit fees for the mechanical and electrical systems. Since there will not be any boilers or large equipment that utilize combustion as a heating source, air quality permits will not be required. Site work may require additional approvals which could affect the extent of the design schedule.

Acoustic Issues

The occupancy and activities at the Old Barracks Museum require that the HVAC system operate quietly. Sources of mechanical system noise include excessive liquid velocity in hydronic piping, mechanical and air noise from air handling systems and operating sounds from control devices. PEG is aware of these and other potential sources and will ensure that these problems will be avoided.

Archaeological Services Approach

Hunter Research anticipates that an archaeological assessment will be required for project compliance with the New Jersey Register of Historic Places Act in connection with proposed HVAC upgrades. A desktop review of the project plans is proposed to assess the potential effects of ground disturbance on archaeological resources associated with the Old Barracks property. It is presumed that the bulk of any proposed in-ground work for this project will take place within soils previously disturbed by earlier utilities installations. However, there is a possibility that the replacement/addition of pipes and pumping facilities may encroach upon previously undisturbed ground which could result in significant archaeological resources being encountered. The desktop review will consider whether archaeological monitoring during construction is a suitable approach for this project or whether some level of pre-construction testing and mitigation is required.

Considerable archaeological work has been conducted on the Old Barracks property since the early 1980s, much of it performed by Hunter Research and some in conjunction with earlier utilities installations. The archaeological character of the property to the north and northwest of the building is reasonably well-known in terms of the location and depth of potentially significant buried remains. Review of previously gathered archaeological data and reports will inform the current project and assist in safeguarding the historical integrity of the Old Barracks lot.

The proposed archaeological assessment will involve background research, site inspection, coordination with other project team members during design development, and preparation of a brief technical memorandum, all conducted in accordance with the standards of the New Jersey Historic Preservation Office (NJHPO). The technical memorandum will be submitted to the NJHPO for review in conjunction with the application for project authorization (APA) under the New Jersey Register of Historic Places Act Rules (N.J.A.C. 7:4). It is assumed the APA will be prepared by others on the project team.

The archaeological assessment will primarily be completed in the Design Development Phase in advance of submission of the APA to the New Jersey Historic Preservation Office.

Construction Budget

The scope of work indicates the construction budget for this project to be $2,303,738. This budget appears to be appropriate for the desired mechanical and electrical system replacement and upgrades. However, this may not fully encompass the necessary architectural and site work that will be associated with this project. Our recent experience suggests there continues to be cost volatility in the construction market; although not as extreme as experienced over the past several years, it is still a cause for concern. The cost estimates provided by our excellent estimators, Becker and Frondorf, will be very important to identifying budget issues early in the process. This will allow for adjustments to the scope of work or to the project budget prior to bidding.

Below is a description of the overall design process, which will incorporate the MEP/ FP and archaeology project approaches described above.

A. Schematic Design:

As is usually the case, this first phase of the project at the Old Barracks is the most important. This is where the entire team spends time making sure that we fully understand the building conditions, particularly the HVAC systems, and their impact on the overall structure. The CCH design team understands and deeply respects the Secretary of the Interior's Standards for Historic Preservation as well as the relevant building codes. We will be guided by the standards as well as our decades of experience with significant historic sites, as we explore different design options for addressing the life safety issues.

Our work will begin by providing a firm foundation, so to speak, for the project as a whole. This means careful assessment of the existing conditions; surveying and carefully measuring the spaces, particularly where the new HVAC system's equipment will be installed; careful research into the various design constraints, especially building and fire code requirements, the needs of the building's historic fabric and the needs of the artifacts being stored and displayed, etc.; and careful communication with the operators and stewards of the building.

Required regulatory and agency approvals will be confirmed during this phase. The project schedule will be confirmed and adjusted as additional information from reviewing agencies is received and schedules (e.g. relating to holidays) taken into account.

As stated in the RFP, we know that the project requires Project Authorization by the Historic Preservation Office, and code/ permit review by NJDCA. We have extensive successful experience with these review processes.

It is likely that we will want to meet with the appropriate staff from the Historic Preservation Office (HPO) at a site meeting as early as possible in order to that the preferred approach will not be considered an encroachment. Once preliminary feedback is received from the HPO, the preferred design approaches for the various code issues can be further developed and then approved by the project team. Using this concept plan, we will then prepare the full Schematic Design package, including a cost estimate and all the required items on the Deliverables Checklist. In order to keep on schedule, we will also submit for Project Authorization.

B. Design Development Phase:

Early feedback from the Historic Preservation Office is key to keeping on track with the project as the Project Authorization process can take more than 60 days. If we are confident that the HPO will consider the project "non-encroaching," the design of the project can move forward in a more typical and expeditious way.

During Design Development, we will delve more specifically into design details, materials, products, colors, building systems, etc. We will work closely with your project team to select materials, products and mechanical and structural systems that are appropriate from a historic preservation point of view, that are long-lasting, that require as little maintenance as possible. Here, we will also get key feedback about potential impacts on archaeological resources, which may require adjustment to the design or, if that isn't possible, inclusion of archaeology in the construction scope of work.

Because the Old Barracks is an operating museum and because of the historic sensitivity of the building and its exhibits, part of our work will be to address site logistics and construction scheduling. The entire team has experience working in these kinds of constrained conditions.

The Design Development cost estimate is perhaps the most important one in the entire design process. At this point in the project, the project and design teams have settled not only on the overall approach, but on the desired system, material and finish selections. This cost estimate will provide crucial feedback to make sure that the project is still on track from a budget point of view. And it is here that adjustments can still be easily made in the unlikely event that the budget is being exceeded.

C. Construction Documents Phase:

The decisions and approvals received during Design Development will be fully incorporated and further

detailed during the final phase of design. This phase will consist of the preparation of bid and construction documents consisting of drawings, specifications and other documents setting forth the requirements for the bidding and contracting, and for the successful construction of the project.

This is where any final feedback from the Project Team, from the Project Authorization Review and from the cost estimate can be incorporated. Construction details, materials and systems will be adjusted and details clarified to take into account comments, questions and cost concerns. We will explore potential bid alternates to help insure that the project comes in on budget.

Our team's bid documents will be clear, concise and excellently detailed to provide all of the needed information for bidding and construction, and to reduce questions in the field and change orders.

D. Permit Application Phase:

After Clarke Caton Hintz has finalized the construction documents and received approval from the DPMC, the construction documents will be issued to the appropriate Authorities for their review and issuance of permits. If comments are received, our office will review those comments, make any clarifications required to the documents and issue them back for final approval. Permits and approvals that our office feels will likely be required for this project are:

- NJUCC Building Permit
- DPMC Approvals
- NJ-HPO Authorization (achieved in Design Development)

E. Bidding and Contract Award:

We have worked with government agencies, including the DPMC, and are familiar with the scheduling, budgeting and bidding issues that arise. We will schedule and attend the pre-bid site meeting, and will promptly and clearly respond to all questions that may arise from contractors with addenda/bulletins as necessary. We will also assist the agency as required to insure that received bids are complete and responsive.

F. Construction Phase:

Construction administration on historic properties requires a high level of interface between the architect, owner and contractor. Effective communication between the contractor and design team is critical when addressing unique site conditions and any potential unforeseen concealed conditions. Our team endeavors to provide clear, concise and responsive answers to maintain momentum on site and the overall project schedule.

CCH will work with DPMC to ensure that the construction process is as streamlined as possible. We will provide sufficient field representation, and ensure that the project progresses to meet established deadlines. Our location close to the site will be very helpful in this regard!

We realize that it is important to keep all code officials informed about the progress of work, and will make periodic presentations if necessary. We will assist the DPMC wherever possible to resolve questions or disputes with the contractors and subcontractors. In addition to regularly scheduled, bi-weekly project meetings, we plan on also visiting the site for progress inspections on the alternate weeks and when questions arise. The CCH team is known for being responsive and effective during all phases of the project, and especially during construction.

G. Project Close-Out Phase:

CCH will plan, schedule and execute all close out activities to ensure a smooth transition from construction to occupancy by the owner. Our office will develop punch list and inspection reports, verify the correction of the deficient items and determine substantial completion. We are committed to providing excellent service throughout the entire process, until the project is fully complete.

SECTION 6:
Project Schedule/ Narrative

6.0 PROJECT SCHEDULE

On the following pages we have developed a detailed design schedule for the project.

While this project is particularly complex and detail-oriented, we believe that the proposed design schedule included in the RFP is workable, for the most part, because all of the team members, especially CCH, are so experienced with the building and with these kinds of projects, and because we are located close to the Old Barracks Museum and will be able to assess and then re-check conditions quickly and efficiently.

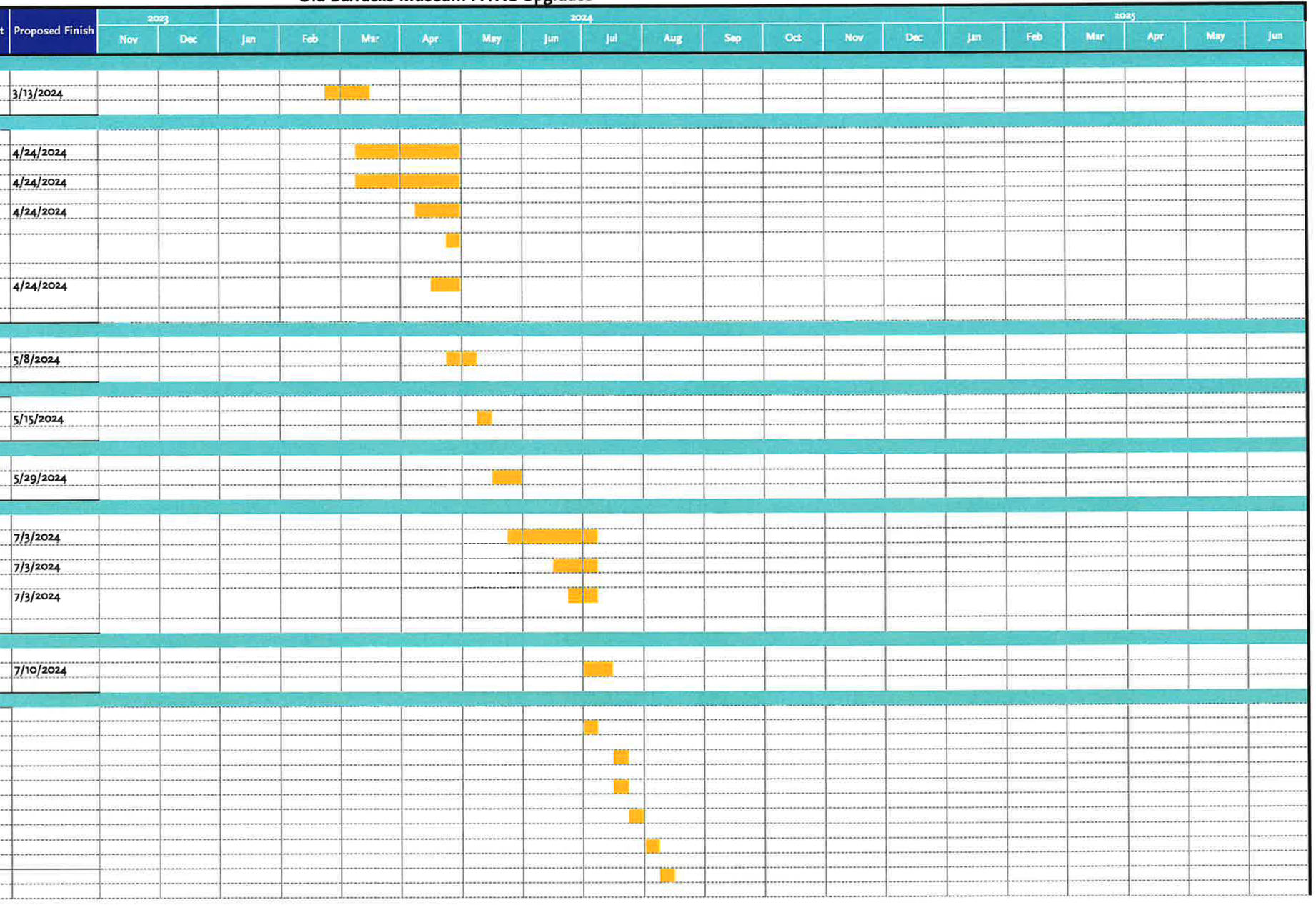
As stated in the Project Approach, we have some concerns about the complexity of the construction project itself and the availability of highly technical and very specific HVAC equipment. We have therefore extended the construction duration from 180 days to 240 days.

DPMC #A1390-00
Old Barracks Museum HVAC Upgrades

Description	Proposed Start	Proposed Finish
Site Access Approvals & Schedule Design Kick-Off Meeting: 14 Days		
Kick-off Meeting	11/6/2023	11/20/2023
Preliminary Research, Site Visit, etc.	11/6/2023	11/20/2023
Schematic Design Phase: 49 Days		
Survey Existing Conditions (Architect, MEP, Structural S/C)	11/20/2023	1/3/2024
Prepare Base Drawings	11/27/2023	12/6/2023
Prepare Design Options for HVAC Systems	11/27/2023	12/11/2023
Present Design Options for Feedback and Consensus	12/11/2023	
Prepare Concept Design Drawings of Preferred Option	12/11/2023	12/18/2023
Preliminary Meeting with NJHPO for Feedback	12/18/2023	
Adjust Concept Design to Address NJHPO Comments	12/18/2023	12/27/2023
Present Revised Design for Comments from Team	12/27/2023	
Prepare Schematic Design Dwgs & Outline Spec	12/27/2023	1/3/2024
Prepare Current Working Estimate/ Cost Analysis	12/18/2023	1/3/2024
Presentation of SD Report and Drawings to Project Team/Submission of Opinion of Cost	1/3/2024	
Submit for Project Authorization to NJHPO	12/27/2023	3/4/2024
Prepare Scope of Work Document & Compliance Statement and Checklist	12/27/2023	1/3/2024
SD Project Team & DPMC Plan Code Unit Review & Comment: 14 Days		
DPMC Review/Approval of SD Submission	1/3/2024	1/17/2024
Design Development Phase: 35 Days		
Revise Design to Address Team & NJHPO Comments	1/17/2024	1/24/2024
Prepare Design Development Dwgs & Outline Spec	1/17/2024	2/28/2024
Begin Preparing Preservation Plan Document	1/17/2024	2/28/2024
Prepare Current Working Estimate/ Cost Analysis	2/14/2024	2/28/2024
Presentation of DD Report, Drawings & Specs to Project Team/Submission of Opinion of Cost	2/28/2024	
Prepare Scope of Work Document & Compliance Statement and Checklist	2/14/2024	2/28/2024
Submit Preservation Plan to NJHPO for Comments	2/28/2024	

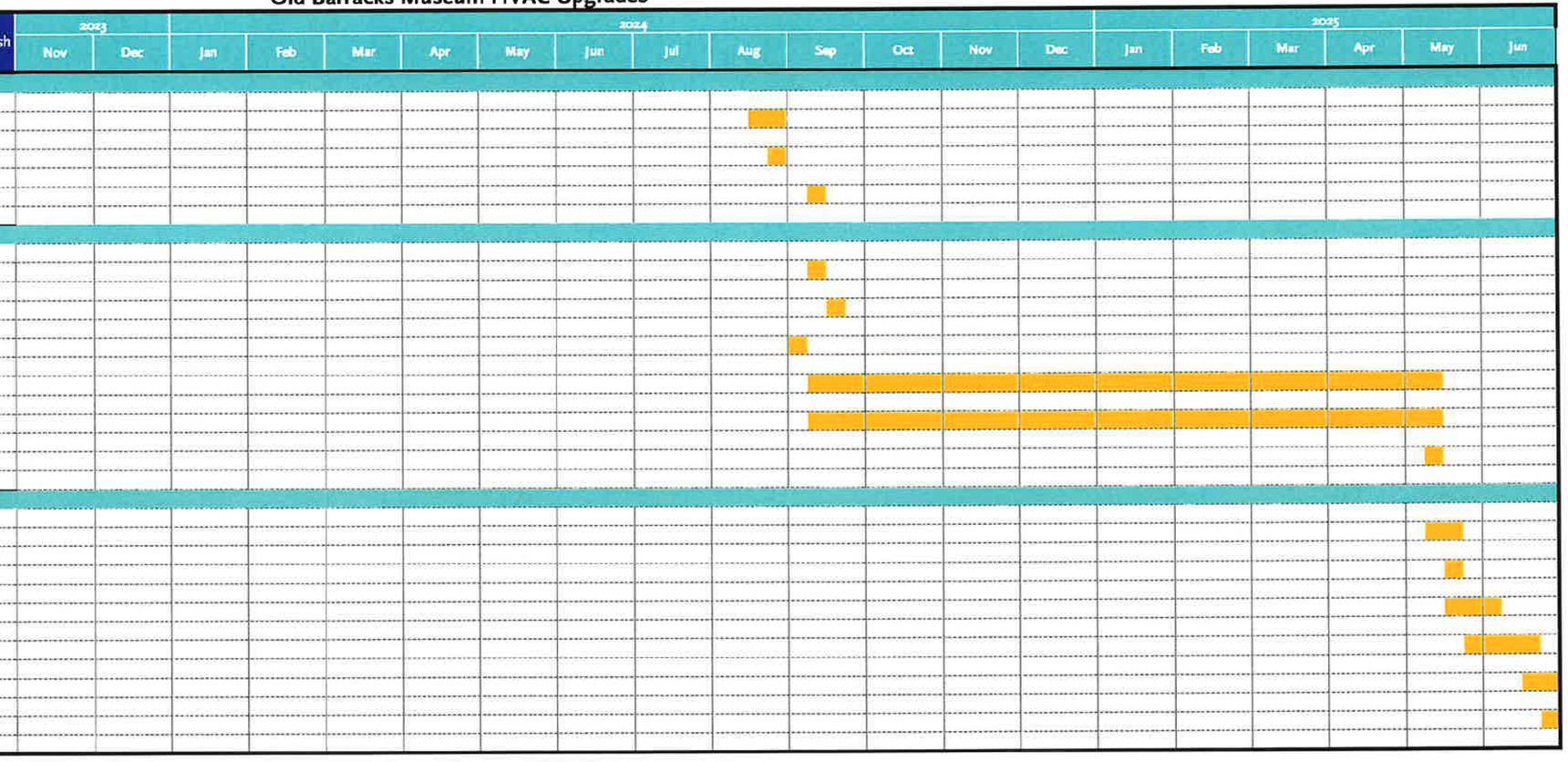
DPMC #A1390-00
Old Barracks Museum HVAC Upgrades

Description	Proposed Start	Proposed Finish
DD Project Team & DPMC Plan Code Unit Review & Comment: 14 Days		
DPMC Review/Approval of DD Submission	2/28/2024	3/13/2024
Final Design Phase: 42 Days		
Prepare Final Design Dwgs and Specifications	3/13/2024	4/24/2024
Revise Preservation Plan per Comments	3/13/2024	4/24/2024
Prepare Current Working Estimate/ Cost Analysis	4/10/2024	4/24/2024
Presentation of FD Report, Drawings & Specs to Project Team/Submission of Opinion of Cost	4/24/2024	
Prepare Scope of Work Document & Compliance Statement and Checklist	4/17/2024	4/24/2024
FD Project Team & DPMC Plan Code Unit Review & Comment: 14 Days		
DPMC Review/Approval of FD Submission	4/24/2024	5/8/2024
Final Design Resubmission to Address Comments: 7 Days		
Prepare Revised Final Design Dwgs and Specifications	5/8/2024	5/15/2024
Revised FD Project Team & DPMC Plan Code Unit Review & Comment: 14 Days		
DPMC Review/Approval of Revised FD Submission	5/15/2024	5/29/2024
DCA Plan Submission Phase: 30 Days		
Submit Completed Documents via On-Line Portal	5/29/2024	7/3/2024
Follow up and Respond to Questions	6/19/2024	7/3/2024
Prepare Scope of Work Document & Compliance Statement and Checklist	6/28/2024	7/3/2024
Permit Application Phase: 7 Days		
Submit Permit Application Forms	7/3/2024	7/10/2024
Bid Phase: 42 Days		
Advertise to Bid	7/3/2024	
Pre-Bid Conference/ Mandatory Site Meeting	7/17/2024	
Prepare Meeting Minutes, etc.	7/19/2024	
Bid Questions Due	7/26/2024	
Issue Bulletin/ Addenda	8/2/2024	
Bids Due	8/14/2024	



DPMC #A1390-00
Old Barracks Museum HVAC Upgrades

Description	Proposed Start	Proposed Finish
Award Phase: 28 Days		
Evaluate Bids/Make Recommendations: Post Bid Meeting	8/14/2024	8/28/2024
Contract Award/Letter of Recommendation	8/30/2024	
Bidding & contract Award Phse Deliverables Checklist	9/11/2024	
Construction Phase: 240 Days		
Issue Notice to Proceed	9/12/2024	
Pre-Construction Meeting	9/17/2024	
Review Construction Schedule	9/7/2024	
Construction	9/12/2024	5/14/2025
Periodic Progress Meetings & Field Observation Visits	9/12/2024	5/14/2025
Construction Phase Deliverables Checklist	5/14/2025	
Project Closeout Phase: 40 Days		
Punch List Inspections	5/14/2025	5/21/2025
Substantial Completion	5/21/2025	
Correction of Punch List	5/21/2025	6/4/2025
Submission of Close-Out Docs, As-Built & Record Sets	5/28/2025	6/18/2025
Final Completion	6/16/2025	6/25/2025
Project Closeout	6/25/2025	



SECTION 7:
Forms

Certification [redacted]

CERTIFICATE OF EMPLOYEE INFORMATION REPORT

RENEWAL

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-FEB-2020** to **15-FEB-2027**

CLARKE CATON HINTZ
100 BARRACK STREET
TRENTON NJ 08608

ELIZABETH MAHER MUOIO
State Treasurer

Public Law 2005, Chapter 92
Formerly: Executive Order 129

SOURCE DISCLOSURE CERTIFICATION FORM

Bidder: Clarke Caton Hintz, PC

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Bidder.

The Bidder submits this Certification as part of a bid proposal in response to the referenced solicitation issued by the State of New Jersey, Department of Treasury, Division of Property Management and Construction (DPMC), in accordance with the requirements of Public Law 2005, Chapter 92, (N.J.S.A. 52:34-13.2 et seq., superseding Executive Order 129 (2004)).

The following is a list of every location where services will be performed by the bidder and all subcontractors.

Bidder or Subcontractor	Description of Services	Performance Location(s) by Country
Clarke Caton Hintz, PC	Architecture, Historic Architecture	USA
Princeton Engineering Group	MEP/FP Engineering	USA
Becker & Frondorf.	Cost Estimating	USA
Hunter Engineering	Archaeology	USA
Harrison-Hamnett, PC	Structural Engineering	USA
B&G Engineering	Site/Civil Engineering	USA

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced Project Number will be immediately reported by the Bidder to the Contract Compliance Unit in the DPMC, Department of Treasury, State of New Jersey, PO Box 034, Trenton, NJ 08625.

I understand that, after award of a contract to the Bidder, it is determined that the Bidder has shifted services declared above to be provided within the United States to sources outside the United States, prior to a written determination by the Director, Division of Property Management and Construction, that extraordinary circumstances require the shift of services or that the failure to shift the services would result in economic hardship to the State of New Jersey, the Bidder shall be deemed in breach of contract, which contract will be subject to termination for cause under its contract with DPMC.

I further understand that this Certification is submitted on behalf of the Bidder in order to induce DPMC to accept a bid proposal, with knowledge that the State of New Jersey and DPMC are relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Bidder: Clarke Caton Hintz, PC
[Name of Organization or Entity]

By: _____ Title: Principal

Print Name: John D. S. Hatch, FAIA, LEED AP Date: October 30, 2023

FEE PROPOSAL:
(Submitted Separately)

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

AGREEMENT
BETWEEN THE STATE OF NEW JERSEY AND THE
CONSULTANT

TABLE OF CONTENTS

In this AGREEMENT made upon notice of acceptance by the Owner of the Consultant's Proposal

BETWEEN the Owner: State of New Jersey, by and through its Contracting Agent, the Deputy Director of the Division of Property Management and Construction in the Department of Treasury

and the Consultant, as noted in the Notice of Award for Project: **A1390-00 SBE Set-Aside**
HVAC Upgrades
Old Barracks Museum
Trenton, Mercer County, NJ

The Owner and the Consultant agree as set forth below:

A. CONSULTANT'S RESPONSIBILITIES

A.1 GENERAL

A.1.1 The Consultant shall become fully familiar with the contractual obligations of all entities doing work for the project and all relevant project documentation.

A.1.2 The Consultant shall be responsible for satisfying all of the obligations described in this AGREEMENT, even if such obligations are not addressed in the Consultant's proposal(s). This AGREEMENT establishes the minimum obligations of the Consultant which obligations may be supplemented by the Consultant in its proposal(s). If the services promised in the Consultant's proposal(s) exceed those described in the articles of this AGREEMENT, then the Consultant shall be responsible for satisfying additional obligations described in its proposal(s).

A1.3 The consultant shall comply with all requirements in the Procedures for Architects and Engineers, Second Edition, or subsequent editions. These requirements are in addition to those in this AGREEMENT.

A.1.4 The Consultant services consist of those services performed by the Consultant, the Consultant's employees, the Consultant's sub-consultants and contractors. The Consultant shall utilize the key staff members identified in its Technical Proposal. The Consultant shall notify the Owner in advance of any proposed change in its key staff members identified in its proposal. The Consultant shall submit to the Owner for approval the name and qualifications of the proposed replacement with equal or superior qualifications at no additional cost to the Owner. No change shall take effect unless the Owner approves the change in writing. The Owner may also determine, in the Owner's sole discretion, to terminate the Project, and/or to terminate the Consultant AGREEMENT, and/or claim all damages against the Consultant resulting from the Project termination or from the Consultant AGREEMENT termination.

A.1.5 All claims against the Consultant for Errors and Omissions will be pursued by the Owner to secure remuneration during the close-out phase of the project.

A.1.6 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.

A.1.7 Any changes to this AGREEMENT must be made in writing in the form of an approved Amendment. The Amendment must be approved by the Owner's Contracting Officer.

A.1.8 Any work performed by the Consultant that differs from this AGREEMENT, without an amendment from the Owner, is done at the Consultant's own financial risk, any additional work done on the Consultant's own initiative without an approved Amendment is done at the Consultant's own financial risk.

A.1.9 The Consultant shall promptly notify the Owner of any changes to the scope of services which increase or decrease the Consultant services. No such change in scope shall be performed by the Consultant, without prior written approval by the Owner. Notice of request for additional compensation shall be given to the Owner within 30 working days of the event giving rise to such a request with accompanying justification for the change and a detailed breakdown of the basis for the costs.

A.1.10 The Consultant shall maintain all documentation related to deliverables, products, transactions or services under this contract for a period of five (5) years from the date of final payment. Such records shall be made available for audit to the New Jersey Office of the State Comptroller or any other State audit agency upon reasonable demand.

A.2 DESIGN PHASE

A.2.1 All documents including drawings and specifications, any changes, revisions or amplifications thereof, as well as all construction cost estimates, shall be subject to the written approval of the Owner before the documents are accepted. The approval of drawings by the Owner is not to be construed as authority to violate, cancel or set aside any provisions of applicable codes.

A.2.2 Construction documents must comply with the latest adopted edition of the Uniform Construction Code in effect at the time of approval by the Owner at the FINAL REVIEW phase as defined in the scope of work.

A.2.3 Unless otherwise provided in the AGREEMENT documents, the Consultant will be requested to secure and be reimbursed for payment of all permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the work and which are legally required at the time of receipt of bids.

A.2.4 In the event that the construction bids received are in excess of 5% of the approved Consultant's final estimate for construction of the project, and changes to drawings and/or specifications are required to meet such approved estimate, the Consultant shall redesign and/or set up sufficient approved alternate designs, plans and specifications for the project work, to secure a bid that will come within the allocation specified by the Owner without impacting the programmatic requirements of the project. Such redesign work and changes to plans, including reproduction costs for submission in order to obtain final approval and permits, shall be undertaken by the Consultant at no additional cost to the Owner.

A.3 CONSTRUCTION ADMINISTRATION PHASE

A.3.1 If the scope of work calls for construction administration services, the following shall apply:

A.3.2 The Consultant shall visit the site at scheduled intervals appropriate to the stage of construction of the Project to become generally familiar with the quality and progress of the construction work that has been completed and to determine, in general, if the construction work is being performed in a manner indicating that, when completed, the work will be in accordance with the contract documents. The Consultant shall not be required to make continuous and/or exhaustive on-site inspections to check the quality or the quantity of the construction work. On the basis of the on-site observations, the Consultant shall keep the Owner informed of the progress and quality of the construction work in order to endeavor to guard the Owner against defects and deficiencies in the work.

A.3.3 At all times the Consultant shall have access to the work to determine if it is proceeding in accordance with the Contract documents. However, neither the Consultant nor its sub-consultants shall have control over or be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work; these are solely the Construction Contractor's obligations under the contracts for construction. The Consultant shall not be responsible for Construction Contractor's schedules or failure to carry out the work in accordance with the contract documents. Except as otherwise provided in this AGREEMENT, the Consultant shall not have control over or charge of acts and omissions of the contractor's, construction subcontractors, or their agents or employees, or any other persons performing the work.

A.3.4 Based on the Consultant's observations and evaluations of the construction contractor's Applications for Payment, the Consultant shall certify the amounts due to the construction contractor's.

The Consultant's certification of payment shall constitute a representation to the Owner, based on the Consultant's observations at the site as provided above, and the data contained in the construction contractor's Applications for Payment, that the construction contractor's work on the project has progressed to the point indicated and the quality of the construction work is generally in accordance with the contract documents. The former representations are subject to an evaluation of the construction work for conformance with the contract documents upon substantial completion, to results of subsequent tests prior to completion and specific qualifications expressed by the Consultant. The issuance of Certificate of Payment shall further constitute a representation that the construction contractor's subcontractors for the project are entitled to payment in the amount certified. Issuance of Certificates of Payments are not a representation that the Consultant has (1) made continuous and exhaustive inspections to check the quality or quantity of work, (2) reviewed the construction contractor's construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from construction contractor's subcontractors and material suppliers and other data requested by the Owner to substantiate construction contractor's right to payment or (4) ascertained how and for what purpose the construction contractor's has used money previously paid on account of contract sum. These are the construction contractor's responsibilities under the contracts for construction.

A.3.5 Within ten (10) working days of the date that it receives a change order request from the Owner, the Consultant shall evaluate and make specific written recommendations, including verification of costs, on all contractor change orders that relate to the execution and progress of the work and on all matters or questions related thereto and, upon notification, shall attend and actively participate at administrative hearings or settlement conferences in connection with such change orders. If the nature of the work described in the change order is complex, the Owner representative may grant the Consultant additional time, if requested in writing by the Consultant, to evaluate the change order.

A.3.6 The Consultant shall have the authority to reject construction work on the project that does not conform to the contract documents. In such cases the Consultant will advise the Owner of the rejection. Whenever the Consultant considers it necessary or advisable for implementation of the intent of the contract documents, the Consultant will have the authority to require additional inspection or testing of the work in accordance with the contract documents, whether or not such work is fabricated, installed or completed. However, neither the authority of the Consultant nor a decision made in good faith either to exercise or not to exercise such authority shall create a duty or responsibility of or by the Consultant to the construction contractor's construction subcontractors, material and equipment suppliers, their agents or employees or other persons performing portions of the construction work on the project.

A.3.7 The Consultant shall review and approve or take other appropriate action upon the construction contractor's submittals such as shop drawings, product data and samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in

the contract documents. The Consultant's action shall be taken with such reasonable promptness as to cause no delay on the construction work on the project, while allowing for sufficient time in the Consultant's professional judgment for adequate review. Since it is the construction contractor's responsibility to do so under the contracts for construction, review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for installation and performance of equipment or systems designed by the construction contractor's. Unless otherwise provided in this AGREEMENT, these remain the responsibility of the construction contractor's to the extent required by the contract documents. The Consultant's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Consultant, of construction means, manners, methods, techniques, sequences or procedures. The consultant's approval of specific items shall not indicate approval of an assembly of which the item is component. When professional certification of performance characteristics of materials, systems or equipment is required by the contract documents, the Consultant shall be entitled to rely upon such certifications to establish that the materials, systems, or equipment will meet performance criteria required by the contract documents.

A.3.8 The Consultant's responsibilities for Construction Administration commences with the award of the construction contract and terminates at the earlier of the issuance to the Contractor of a Final Certificate of Payment or sixty (60) working days after the date of substantial completion of the construction work.

B. OWNER'S RIGHTS AND RESPONSIBILITIES

B.1 OWNER'S RIGHTS

B.1.1 The Owner shall have the right to perform work related to the project and to award contracts in connection with the project that are not part of the Consultant's responsibilities under the AGREEMENT. The consultant shall notify the Owner in writing if any such independent action will in any way compromise the Consultants' ability to meet their responsibilities under the AGREEMENT.

B.1.2 The Owner reserves the right to approve the Consultant's personnel and to require a replacement satisfactory to the Owner. The Owner reserves the right to have such person replaced if, in the judgment of the Owner, any such person proves unsatisfactory. However, such replacement must fit within the rate/fee structure; in the alternative, the Owner shall have the option for a higher rate person for which the Consultant shall be compensated at the higher rate.

B.1.3 The Owner shall have the right to effect the removal of any of the Consultant's employees at any time during the duration of the AGREEMENT if that employee is deemed not to be of the level of competence or ability required under the AGREEMENT, or said employee is for any reason found to be unsuitable for the work. In such case, the Consultant shall promptly submit the name and qualifications of a replacement for approval by the Owner.

B.1.4 The Owner shall have the right to assign the administration of any or all contracts related to this project from the Owner to another State Agency, Authority or Commission at any time during the life of the project. In doing so, the Consultant agrees to continue to perform all contractual work under the AGREEMENT. The Consultant shall make no claim against the Owner in the event of such assignment.

B.1.5 The Owner may make changes in the scope of services within the general scope of the AGREEMENT. The Owner may also make changes to the scope of the project which may give rise to changes in the scope of the Consultant services. In such case, the Consultant shall be entitled to an adjustment in fee and in other terms and conditions of the AGREEMENT.

B.2 OWNER'S RESPONSIBILITIES

B.2.1 The Owner is contracting for the Consultant's services through the Contracting Officer of the Owner, the Division of Property Management and Construction (DPMC). The Contracting Officer is an officer of the State Department of the Treasury, DPMC and is responsible for the administration of the work of the D\PMC. The Contracting Officer represents the Owner, either directly or through an appointed representative, in all dealings with the Consultant.

B.2.2 The Owner shall provide information regarding the requirements of the project, including a scope of work which shall set forth the Owner's objectives, constraints and criteria, including space requirements, special equipment, systems and site requirements, budget constraints and the required date of completion.

B.2.3 The Contracting Officer shall designate a Project Manager authorized to act on the Owner's behalf with respect to the project. The Contracting Officer's representative has only those duties which are required of an owner. The responsibility for completion of this project pursuant to the contract documents remains that of the Contractor(s). The responsibility for performance of the Consultant contractual obligations remains with the Consultant.

B.2.4 The information required in the above paragraphs in this Article shall be furnished at the Owner's expense.

C. CONTRACT DOCUMENTS

C.1 The following items identify the contract documents comprising the AGREEMENT.

1. AGREEMENT BETWEEN THE STATE OF NEW JERSEY AND THE CONSULTANT

2. GENERAL CONDITIONS TO THE CONSULTANT AGREEMENT **DATED MAY 2016.**

3. REQUEST FOR PROPOSAL **DATED OCTOBER 03, 2023** INCLUDING:
   3.1 SCOPE OF WORK
   3.2 CONSULTANT PROPOSAL PACKAGE

4. PROCEDURES FOR ARCHITECTS AND ENGINEERS, CURRENT EDITION

5. CONSULTANT'S TECHNICAL PROPOSAL

6. CONSULTANT'S FEE PROPOSAL

7. NOTICE OF AWARD/NOTICE TO PROCEED LETTER

D. PROFESSIONAL LIABILITY INSURANCE

D.1 The Consultant shall maintain Professional Liability Insurance with limits required in the Consultant Proposal Package for the Project. The insurance carrier shall be registered with the N. J. Department of Insurance and licensed or authorized to conduct business in the State of New Jersey, as required by law. In the event of a loss, the Consultant shall be held responsible for payment of any deductible as though there were no deductible. Such insurance shall be maintained for a period of not less than six months following the actual completion and acceptance of the project by the Owner. Contractual Liability Insurance is not acceptable.

E. CONSTRUCTION COST

E.1 It is understood that the limit of funds available for construction (CCE) exclusive of permits, land costs, furnishing, contingencies and professional fees will be as noted in the project scope of work.

F. CONSULTANT COMPENSATION

F.1 The Consultant will be compensated for professional services as indicated in the Notice of Project Award in accordance with the fee proposal submitted by the Consultant and negotiated and/or accepted by the Owner. The Owner will compensate the Consultant in accordance with the following terms and conditions:

F.1.1 The lump sum payable to the Consultant as established in their Fee Proposal shall compensate the consultant in full for all services as described in the Notice to Proceed. The Consultant shall not be entitled to compensation for any services provided prior to issuance of the project Notice to Proceed.

F.1.2 The Consultant shall submit a payment schedule to the Owner's representative for approval prior to submittal of the Consultant first invoice. The schedule should be in detail, assigning a dollar value for each phase of work anticipated on a monthly basis throughout the entire contract.

F.1.3 The monthly compensation to the Consultant shall be paid in accordance with the payment schedule submitted by the Consultant and approved by the Owner.

F.1.4 Duration of services shall be as defined in the scope of work commencing on the date of the issuance of the Notice to Proceed.

F.1.5 Services provided under this AGREEMENT shall commence on the date of the written Notice to Proceed issued by the Owner. Unless otherwise ordered by the Owner in writing, the Consultant shall initiate its contract work no later than five (5) working days after its receipt of the Notice to Proceed. A Notice to Proceed may be issued by the Owner at its convenience. Any right of the Consultant to an adjustment because of a delay in issuing a Notice to Proceed shall be determined in accordance with the GENERAL CONDITIONS TO THE CONSULTANT AGREEMENT.

F.1.6 Should the Project duration be extended and the Owner requests continuation of services beyond the contracted duration, then the Consultant agrees to furnish services in accordance with the terms of the Consultant AGREEMENT for the additional period required for completion of the Project.

F.1.7 The Owner shall not be liable to the Consultant for indemnification, damages, or costs of any kind sustained by the Consultant as the result of the negligence or breaches of contractual obligations committed by the Consultants Sub Consultant(s), Contractor(s) or any other third party.

F.1.8 The Owner shall reimburse the Consultant for Owner requested continuation of services beyond the specified contract period based upon the values identified in the approved payment schedule which correspond to the activities for which the extended services are being requested.

F.1.9 To the extent that the Consultant's services are required beyond the time identified in this AGREEMENT and/or to the extent that the Consultant is required to perform services not required under the AGREEMENT, the Consultant shall be entitled to an additional fee. However, the Consultant shall not be entitled to any additional compensation to the extent that delay in completion of the project is the result of the negligent or wrongful acts or omissions of the Consultant.

END OF AGREEMENT

DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION

REQUEST FOR PROPOSAL (DESIGN CONSULTANT SERVICES)

DPMC PROJECT NO.: A1390-00
Project Description: HVAC Upgrades
Old Barracks Museum
Trenton, Mercer County, NJ

Firms:

Second Selection Dated: October 11, 2023

Firms:

Third Selection Dated: October 12, 2023

Firms:

Mandatory Pre-Proposal Meeting/Site Visit: Monday, October 16, 2023 at 10:00 AM

Proposal Due Date (Electronic Submission): Tuesday, October 31, 2023, NO LATER THAN 2:00 PM

This confirms that your firm was randomly selected from the list of pre-qualified firms in your discipline/specialty category and is invited to submit a proposal for this project. **Attached is the Consultant Proposal Package for this project. The Scope of Work is available on the Division's website at https://www nj.gov/treasury/dpmc/**

The mandatory pre-proposal meeting/site visit is scheduled for **Monday, October 16, 2023 at 10:00 AM**. Consultants shall meet at Old Barracks Museum – 101 Barracks Street, Trenton, Mercer County, NJ 08608 (Rain or Shine.) Only those firms attending the mandatory pre-proposal meeting will be permitted to submit a proposal. For more information on the site visit or the Scope of Work, please call [redacted], DPMC Project Design Manager at [redacted]

PROPOSAL DELIVERY (refer to Section V. Submission for further instructions):

- The proposal package submission for this project will be conducted electronically.
- Hard copies of the proposal submission will not be accepted.
- Proposals submitted after the 2:00 pm deadline will not be accepted.

Subsequent to receipt of this Consultant Proposal Package and the Scope of Work, should your firm decide not to participate, please notify [redacted] via email at [redacted] soon as possible.

William Mahan — October 3, 2023

Consultant Selection Coordinator — Date

c: C. Geary Consultant Selection Committee Members

CONSULTANT PROPOSAL PACKAGE

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION
33 WEST STATE STREET, 9TH FLOOR
P. O. BOX 034
TRENTON, NEW JERSEY 08625-0034

CONSULTANT PROPOSAL PACKAGE - INSTRUCTIONS

I. CONTENTS

This Consultant Proposal Package contains the following documents:

(a) Request for Proposal (Cover Letter and Instructions)
(b) Key Team Member Project Experience Data Sheet
(c) Project Key Personnel List
(d) Sample Technical Proposal Evaluation Form
(e) Professional Services Fee Proposal
(f) Consultant Task/Labor/Fee Sheet
(g) Sub-Consultant Task/Labor/Fee Sheet
(h) Scope of Work (Available on the DPMC website at https://www nj.gov/treasury/dpmc/
(i) Agreement Between the State of New Jersey and the Consultant
(j) A/E General Conditions Revised May 2016
(k) Addendum "A"

II. GENERAL INFORMATION

The proposal submitted by each consultant will be in two parts:

(a) Technical Proposal (submitted via email. See instruction below)
(b) Fee Proposal (submitted via email. See instruction below)

The technical proposal and fee proposal must be separate attachments. You are permitted to submit the technical and fee proposals in separate email but they both must arrive by the deadline.

III. TECHNICAL PROPOSAL

The Technical Proposal package, which must be completed by the Consultant and returned, consists of the following:

(a) Cover letter and Firm/Project Team experience
(b) Organization Chart
(c) Resumes of Key Team Members
(d) Key Team Members Project Experience Data Sheet (form enclosed)
(e) Project Key Personnel List (form enclosed)
(f) Project Approach
(g) Project Schedule/Narrative
(h) Certificate of Employee Information Report
(i) Certification of Public Law 2005, Chapter 92

Please ensure that all the above items are addressed in the order presented here in your technical proposal. A sample of the "Technical Evaluation Form" is included in the package for your information. Each firm's technical proposal will be evaluated on the criteria listed on this form to determine your firm's ability to successfully complete the project.

You may include any photos, graphics, etc., that relate to your firm's past experience and qualifications for this project; however, please keep your proposal as concise as possible.

Consultant/Sub-Consultant Prequalification

Consultants are randomly selected from the list of firms pre-qualified with the Division of Property Management & Construction (DPMC) in the discipline(s)/specialty category (ies) required for the successful completion of the project as described in the Scope of Work.

Consultants must have in-house capabilities or Sub-Consultants to perform all other prequalified architectural, engineering and/or specialty discipline work as described in the project Scope of Work. All Sub-Consultants must be appropriately pre-qualified with the DPMC in the specific discipline/specialty category for the work to be performed on the project. A listing of all the prequalified disciplines can be found on DPMC's website at www.state.nj.us/treasury/dpmc.

Consultants and Sub-Consultants must be pre-qualified in the required discipline/specialty category by the **due date of the project proposal**. If, upon review of the proposal, Consultants/Sub-Consultants are determined to be without the appropriate pre-qualification for a particular discipline(s), the proposal will be deemed non-responsive. Joint Venture firms must be separately prequalified in the discipline(s) required by the project scope of work with at least one of the joint venture firms have the required DPMC prequalification rating.

(a) Cover Letter and Firm Experience

Limit your description of your firm's experience to approximately five projects similar in scope, complexity, construction cost, etc. If sub-consultants are proposed for this project, include their relative experience as well.

(b) Organization Chart

The organization chart should include all of the key team members including sub-consultants (if appropriate), their titles for this project and the firms they represent. For the purpose of this contract, a "key person" is a principal, partner or officer of the firm, project executive, project manager, senior designer or other person represented in the technical proposal as having a responsible role in the successful completion of this project and generally spending 20% or more of their time on any phase of the project.

(c) Resume

Include a resume of each key team member.

(d) Key Team Member Project Experience Data Sheet (Form provided)

Complete one form for each key team member. Reproduce this form as needed. List the requested information for past projects that are similar in scope to this project.

(e) Project Key Personnel / Team Member List (Form provided)

Complete one sheet providing the information requested and continue on to another sheet only if needed. Do not pre[redacted] a separate sheet for each sub-consultant.

Based upon a 40-hour workweek, indicate generally the percentage of time each key person will spend on this project at each phase.

The wage level (1-7) you provide in the right hand column will indicate the level of personnel expertise dedicated to each project phase, thereby assisting the evaluators in their technical evaluations. **Do not include the hourly rates**; only provide the appropriate number 1 thru 7 which reflects the qualification level of the team members. (see attachment 1, "Personnel Levels")

(f) **Project Approach**

Describe your firm's approach to completing the project in accordance with the Scope of Work.

(g) **Project Schedule**

This section must include a bar chart schedule (in calendar days), indicating major project milestones and a narrative, explaining any techniques you plan to use to meet or reduce the project's proposed schedule.

(h) **Certificate of Employee Information Report**

Pursuant to N.J.A.C. 17:27-1.1 et. seq., all firms contracting with the State of New Jersey must comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27, regarding non-discrimination in employment. For your information, copies of Exhibits A and B are included in the A/E General Conditions Revised May 2016. Attached for your information is the State contract policy with respect to the Americans With Disabilities Act.

All firms contracting with the State of New Jersey must provide a copy of the firm's Certificate of Employee Information Report, issued by the NJ Division of Contract Compliance & Equal Employment Opportunity. Please attach a copy of this certificate within your technical proposal.

The application form for the Certificate of Employee Information Report is form AA302 and may be obtained from the Div. of Contract Compliance & EEO's web page which is "http://www.state.nj.us/treasury/contract_compliance/"

NJ Department of the Treasury
Division of Contract Compliance & EEO
P. O. Box 209
Trenton, NJ 08625-0209
[redacted]

[redacted] and prior to execution of the contract.

(i) **Certification of Public Law 2005, Chapter 92**

In accordance with Public Law 2005, Chapter 92 (N.J.S.A. 52:34-13.2 et seq., superseding Executive Order 129 (2004)) all bidders submitting a proposal shall be required to submit a Source Disclosure Certification that all services will be performed in the United States. The bidder shall disclose the location by country where services under the contract will be performed and any subcontracting of services under the contract and the location by country where any subcontracted services will be performed.

(j) **Copies of "Proof of Business Registration Certificate," issued by the NJ Division of Revenue, for your firm and any sub-consultants.**

This registration is requested as part of the Technical Proposal, but is required prior to the award of the project.

(k) **Ownership Disclosure Form**

Complete and return Ownership Disclosure Form or provide proof your firm has done so and it is not more than (6) six months old.

IV. FEE PROPOSAL

The Fee Proposal package consists of the following:

(a) Professional Services Fee Proposal (Cover Sheet)
(b) Consultant Task/Labor Sheet
(c) Sub-consultant Task/Labor Sheet (if needed)
(d) Proof of Required Insurance Coverage
(e) Proof of Business Registration Certificate for the Prime and Sub Consultants
(f) Americans with Disabilities Act (State Contract Language)
(g) MacBride Principle Compliance Certification
(h) Investment Activities in Iran
(i) Ownership Disclosure Form
(j) Certification of Non-Involvement in Prohibited Activities in Russia or Belarus
(k) Federal Certification of Non-Debarment

(a) **Professional Services Fee Proposal (Form provided)**

This document is the cover sheet of your fee proposal. Fill in the dollar amount from your completed task/labor sheets. If you are not using any sub-consultant on this project enter "N/A" on this line. Do not leave any blanks.

REQUIRED ALLOWANCES (as referenced in the Scope of Work)

1. Plan Review and Permit Fee Allowance
2. Water Supply Upgrades Allowance
3. Roof Removal and Replacement Allowance

The consultant will be responsible for all work requested by the Division in the "Allowance" section of the Scope of Work such as materials testing during construction, surveys, soil test borings, water flow test, electrical tests, geotechnical investigations, etc. If the dollar amount of the allowance is not provided by the Division, you must anticipate all associated costs for this work and include the amount on the line entitled "Allowance for Work Specified by the Division" on the Fee Proposal form. If no allowances are requested by the Division, this line will be marked "N/A."

You may also include an allowance for any additional investigation survey work or testing which may require the hiring of various contractors to verify "as-built" or existing conditions. If the SOW does not provide for these services but you consider them to be necessary to the success of this project, describe them in your project approach narrative and include your recommended allowance on the line entitled "Allowance Proposed by Consultant." Contractors (Tradesmen) hired by your firm to do the work directly under your supervision do not need to be pre-qualified by the Division. If you have no additional recommended allowance, enter "N/A" on this line. Do not leave any blanks.

(b) Consultant Task/Labor Fee Sheet

(c) and Sub Consultant Task/Labor/Fee Sheet (Form provided)

Your proposal is based upon a lump sum amount for all professional services indicated and includes all required site visits, office support and reproduction expenses.

It is your responsibility to ensure that your sub-consultants participate in all appropriate phases of the project. Therefore, you must anticipate the amount of hours required by your sub-consultants for each project phase (including attendance at the various design and construction job meetings, site visits, close out activities, etc.). These hours of effort must be determined by you from the Project's Scope of Work and must be included on the "Consultant Task/Labor/Fee Sheet" for each sub-consultant identified. The hours of effort for each project phase or task by discipline submitted on the Task/Labor Tally Sheet will be used by the Selection Committee in their evaluation of your fee proposal.

During the project, the only tasks that will be monitored for actual hours spent on this project and subject to audit are those tasks or deliverables that are clearly delineated in the SOW, such as attendance at a specific number of meetings, site visits or the submission of the proper number of contract documents specified.

Include the reproduction costs by phase on this form. These costs are included in your lump sum fee and therefore will not be treated as a reimbursable expense.

If you are not using sub-consultants on the project, do not submit the Sub-Consultant form.

(d) **Proof of Required Insurance Coverage**
Your firm is required to secure and maintain in force insurance coverage for: Comprehensive General Liability, Comprehensive Automobile Liability (if applicable), Workers Compensation, and Professional Liability. Proof of this coverage must be submitted with your fee proposal. See the attached "Insurance Requirements" excerpt from the "General Conditions to the Consultant Agreement."

Check the lower left hand corner of the "Professional Services Fee Proposal Form" for the required Professional Liability insurance limits for this contract to make certain that your policy meets the limits.

(e) **Business Registration Certificate**
Copies of "Proof of Business Registration Certificate", issued by the NJ Division of Revenue for your firm and any sub-consultants. This should be included with your technical proposal, but, if not, must be provided prior to contract award.

(f) **Americans with Disabilities Act** (State contract language)

(g) **MacBride Principles Certificate**
Complete form, sign and date. This form should be included with your proposal, but, if not, must be provided prior to contract award.

(h)
Investment Activities in Iran
The Investment Activities in Iran form should be included with your proposal, but, if not, must be provided prior to contract award.

(i)
Ownership Disclosure Form
Complete and return Ownership Disclosure Form or provide proof your firm has done so and it is not more than (6) six months old. This form or proof should be included with your proposal, but, if not, must be provided prior to contract award.

V. SUBMISSION

PROPOSAL DELIVERY INSTRUCTIONS:

- **THE PROPOSAL PACKAGE SUBMISSION FOR THIS PROJECT WILL BE CONDUCTED ELECTRONICALLY**. Proposals shall be submitted electronically (via email), to the following email addresses: [redacted]
- The proposal package email must include two attachments. The first attachment will be your technical proposal and the second attachment will be the fee proposal. **DO NOT SUBMIT THE FEE AND TECHNICAL PROPOSAL AS ONE FILE.** Only PDF's will be accepted and the file size cannot exceed 20 mb. If there are any questions regarding the submission of the proposals you may email your question to [redacted]
- HARD COPIES OF THE PROPOSAL SUBMISSION WILL NOT BE ACCEPTED
- **DO NOT INCLUDE THE SELECTION COMMITTEE ON THE EMAIL.**

DO NOT INCLUDE ANY FEE INFORMATION IN YOUR TECHNICAL PROPOSAL. ONLY INCLUDE THE HOURLY WAGE LEVELS ON THE "PROJECT KEY PERSONNEL LIST" IN YOUR TECHNICAL PROPOSAL. INCLUSION OF FEE INFORMATION WITHIN THE TECHNICAL PROPOSAL MAY RESULT IN THE REJECTION OF THE CONSULTANT'S ENTIRE SUBMISSION.

VI. EVALUATION, NEGOTIATION AND AWARD

Subsequent to the evaluation and ranking of the technical proposals by the Selection Committee, the fee proposals will be opened and negotiations, if necessary, will begin with the technically ranked number one firm. Once the final fee proposal

for this project is accepted, the DPMC Contracting Officer will award the contract to the single firm considered to offer the best value to the State.

Upon award, the successful firm will receive a “Notice of Award/Notice to Proceed” letter from the DPMC Assistant Deputy Director and the unsuccessful firms will receive letters informing them of the award.

VII. REVISIONS/CHANGES

Your firm will be notified of any revisions, changes or additions to this Request for Proposal, Consultant Proposal Package and/or project Scope of Work prior to the due date for the Technical and Fee Proposals by Addendum.

ATTACHMENT 1
PERSONNEL LEVELS

LEVEL 7
Title: **Principal, partner or officer of the firm**
Duties: Overall responsibility for the legal, technical and financial obligation of the firm.

Qualifications: Current License in applicable discipline, if required by law.
Experience: N/A

LEVEL 6
Title: **Project Executive**
Duties: Under direct leadership of principal, controls project scheduling and management.

Qualifications: Current license in applicable discipline, if required by law.
Experience: N/A

LEVEL 5
Title: **Project Manager**
Duties: Under direction of Project Executive, directs day-to-day operations of the project, scheduling deadlines, group work activities, etc.

Qualifications: BA, BS degree or equivalent experience.
Experience: Minimum 7 years.

LEVEL 4
Title: **Senior Designer; Senior Engineer**
Duties: Under supervision of Project Manager, reviews project elements to conform to project requirements, directs designer and others on projects.

Qualifications: BA, BS degree or equivalent experience.
Experience: Minimum 5 years

LEVEL 3
Title: **Designer; Abatement Service Technician**
Duties: Under supervision of Designer or Engineer takes designed systems and layout data and sketches and translates into usable information on construction documents or feasibility studies.

Qualifications: BA, BS degree or equivalent experience; AST certification, if required.
Experience: Minimum 3 years

LEVEL 2
Title: **Designer/Draftsperson**
Duties: Takes simple systems and layout data and sketches and translates into usable information; performs drafting as required for construction documents, etc.

Qualifications: High School Graduate, Technical School, or equivalent, with courses in discipline.
Experience: Minimum 3 years direct work experience within discipline.

LEVEL 1
Title: **Draftsperson**
Duties: Performs all entry level tasks: Assembles tracings for review, printing; keeps logs of tracings, shop drawings; performs tracing and drafting chores, etc.

Qualifications: High School Graduate, Technical School or equivalent with courses in discipline.
Experience: N/A

Routine Contract
Technical Proposal Evaluation

PROJECT: **HVAC Upgrades**
Old Barracks Museum

DPMC NUMBER: **A1390-00**

FIRM: _____

RETURN BY: _____

CRITERIA *Provide comments in each criteria area to justify point score*	MAX. POINTS	POINTS
FIRM / TEAM ORGANIZATION / SUB-CONSULTANTS	**30**	
FIRM / PROJECT TEAM EXPERIENCE ON SIMILAR PROJECTS	**30**	
PROJECT APPROACH	**30**	
PROJECT SCHEDULE	**10**	
FINAL SCORE		

1 **2** **3**
EVALUATOR _____ DATE _____

RECEIVED & RECORDED BY _____ DATE _____

MAC BRIDE PRINCIPLES COMPLIANCE CERTIFICATION

Pursuant to Public Law 1995, c.134, a responsible consultant selected, after public bidding, by the Director of the Division of Property Management and Construction, pursuant to N.J.S.A. 52:32-2, must complete the certification below by checking one of the two representations listed and signing where indicated. If a consultant who would otherwise be awarded a contract or agreement does not complete the certification, then the Director may determine, in accordance with applicable law and rules, that it is in the best interest of the State to award the contract or agreement to another consultant who has completed the certification and has submitted a fee proposal within five (5) percent of the most advantageous fee proposal. If the Director finds the consultant to be in violation of the principles which are the subject of this law, he shall take such action as may be appropriate and provided for by law, rule or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the consultant in default and seeking debarment or suspension of the consultant.

I certify, pursuant to N.J.S.A. 52:34-12.2, that the entity for which I am authorized to bid:

____ has no ongoing business activities in Northern Ireland and does not maintain a physical presence therein through the operation of offices, plants, factories, or similar facilities, either directly or indirectly, through intermediaries, subsidiaries or affiliated companies over which it maintains effective control; or

____ will take lawful steps in good faith to conduct any business operations it has in Northern Ireland in accordance with the MacBride principles of nondiscrimination in employment as set forth in N.J.S.A. 52:18A-89.5 and in conformance with the United Kingdom's Fair Employment (Northern Ireland) Act of 1989, and permit independent monitoring of their compliance with those principles.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

_____
Signature of Consultant

Dated:

AMERICANS WITH DISABILITIES ACT

State Contract Language

Equal Opportunity for Individuals with Disabilities

The CONTRACTORS and the STATE do hereby agree that the provision of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S12101 et, seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the STATE pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the CONTRACTOR, its agents, servants, employees or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the STATE in any action or administrative proceeding commenced pursuant to this Act. The CONTRACTOR shall indemnify, protect, and save harmless the STATE, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the STATE's grievance procedure, the CONTRACTOR agrees to abide by any decision of the STATE which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the STATE, or if the STATE incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The STATE shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the STATE or any of its agents, servants, and employees, the STATE shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the STATE of its representatives.

It is expressly agreed and understood that any approval by the STATE of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the STATE pursuant to this paragraph.

It is further agreed and understood that the STATE assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the CONTRACTOR's obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the STATE from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

Public Law 2005, Chapter 92
Formerly: Executive Order 129

SOURCE DISCLOSURE CERTIFICATION FORM

Bidder: _____

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Bidder.

The Bidder submits this Certification as part of a bid proposal in response to the referenced solicitation issued by the State of New Jersey, Department of Treasury, Division of Property Management and Construction (DPMC), in accordance with the requirements of Public Law 2005, Chapter 92, (N.J.S.A. 52:34-13.2 et seq., superseding Executive Order 129 (2004)).

The following is a list of every location where services will be performed by the bidder and all subcontractors.

Bidder or Subcontractor	Description of Services	Performance Location(s) by Country

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced Project Number will be immediately reported by the Bidder to the Contract Compliance Unit in the DPMC, Department of Treasury, State of New Jersey, PO Box 034, Trenton, NJ 08625.

I understand that, after award of a contract to the Bidder, it is determined that the Bidder has shifted services declared above to be provided within the United States to sources outside the United States, prior to a written determination by the Director, Division of Property Management and Construction, that extraordinary circumstances require the shift of services or that the failure to shift the services would result in economic hardship to the State of New Jersey, the Bidder shall be deemed in breach of contract, which contract will be subject to termination for cause under its contract with DPMC.

I further understand that this Certification is submitted on behalf of the Bidder in order to induce DPMC to accept a bid proposal, with knowledge that the State of New Jersey and DPMC are relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Bidder: _____
[Name of Organization or Entity]

By: _____ Title: _____

Print Name: _____ Date: _____

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM

BID SOLICITATION # AND TITLE: _____

BIDDER NAME: _____

Pursuant to N.J.S.A. 52:32-57, et seq. (P.L. 2012, c.25 and P.L. 2021, c.4) any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract with the State of New Jersey must certify that neither the person nor entity, nor any of its parents,subsidiaries, or affiliates, is identified on the New Jersey Department of the Treasury's Chapter 25 List as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found at https://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf. Bidders must review this list prior to completing the below certification. If the Director of the Division of Property Management and Construction finds a person or entity to be in violation of the law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to; imposing sanctions, seeking compliance, recovering damages, declaring the party in default and/or seeking debarment or suspension of the party.

CHECK THE APPROPRIATE BOX

☐ I certify, pursuant to N.J.S.A. 52:32-57, et seq. (P.L. 2012, c.25 and P.L. 2021, c.4), that neither the Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the New Jersey Department of the Treasury'sChapter 25 List of entities determined to be engaged in prohibited activities in Iran.

OR

☐ I am unable to certify as above because the Bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the New Jersey Department of the Treasury's Chapter 25 List. I will provide a detailed, accurate and precise description of the activities of the Bidder, or one of its parents, subsidiaries or affiliates, has engaged in regarding investment activities in Iran by completing the information requested below.

Entity Engaged in Investment Activities _____
Relationship to Bidder _____
Description of Activities _____
_____
Duration of Engagement _____
Anticipated Cessation Date _____
Attach Additional Sheets If Necessary.

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

_____ _____
Signature Date

_____
Print Name and Title

OWNERSHIP DISCLOSURE FORM

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY - DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION
33 WEST STATE STREET, P.O. BOX 230 TRENTON, NEW JERSEY 08625-0230

VENDOR NAME:

PURSUANT TO N.J.S.A. 52:25-24.2, ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO PROVIDE A STATEMENT OF OWNERSHIP.
Please answer all questions and complete the information requested.

		YES	NO
1.	The vendor is a **Non-Profit Entity**; and therefore, no disclosure is necessary.	☐	☐
2.	The vendor is a **Sole Proprietor**; and therefore, no other disclosure is necessary. A Sole Proprietor is a person who owns an unincorporated business by himself or her-self. A limited liability company with a single member is not a Sole Proprietor.	☐	☐
3.	The vendor is a **corporation, partnership, or limited liability company** with individuals, partners, members, stockholders, corporations, partnerships, or limited liability companies owning a 10% or greater interest; and therefore, disclosure is necessary.	☐	☐

If you answered **YES** to Question 3, you must disclose the information requested in the space below:*
(a) the names and addresses of all stockholders in the corporation who own 10% or more of its stock, of any class;
(b) all individual partners in the partnership who own a 10% or greater interest therein; or,
(c) all members in the limited liability company who own a 10% or greater interest therein.

	YES	NO
4. For each of the corporations, partnerships, or limited liability companies identified in response to Question #3 above, are there any individuals, partners, members, stockholders, corporations, partnerships, or limited liability companies owning a 10% or greater interest of those listed business entities?	☐	☐

If you answered **YES** to Question 4, you must disclose the information requested in the space below:*
(a) the names and addresses of all stockholders in the corporation who own 10% or more of its stock, of any class;
(b) all individual partners in the partnership who own a 10% or greater interest therein; or,
(c) all members in the limited liability company who own a 10% or greater interest therein. The disclosure(s) shall be continued until the names and addresses of every non-corporate stockholder, individual partner, and/or member a 10% or greater interest has been identified.

NAME		NAME	
ADDRESS		ADDRESS	
ADDRESS		ADDRESS	
CITY	STATE ZIP	CITY	STATE ZIP

NAME		NAME	
ADDRESS		ADDRESS	
ADDRESS		ADDRESS	
CITY	STATE ZIP	CITY	STATE ZIP

5. As an alternative to completing this form, a Vendor with any direct or indirect parent entity which is publicly traded, may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10% or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10% or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10% or greater beneficial interest.*

Attach additional sheets if necessary)

SCOPE OF WORK

HVAC Upgrades

Old Barracks Museum
Trenton, Mercer County, NJ

Project No. A1390-00

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: July 6, 2023

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SECTION **PAGE**

I. OBJECTIVE

The objective of this project is to upgrade the HVAC system at the historic Old Barracks Museum in Trenton, New Jersey. Upgrading the HVAC system may require temporary removal of portions of the roof and other structural components to gain access. In addition, the State would like to explore the possibility of bringing in an additional separate two-pipe system to eliminate the changeover of the existing pipes from hot to chilled water.

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the following discipline(s):

- **P034 Historical Preservation/Restoration**

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

- **P003 HVAC Engineering**
- **P025 Estimating/Cost Analysis**

As well as, **any and all** other Architectural, Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CONSTRUCTION COST ESTIMATE (CCE)

The initial Construction Cost Estimate (CCE) for this project is $2,303,738.

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 $3,034,299.

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

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

C. CONSULTANT'S FEES

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

IV. PROJECT SCHEDULE

A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE

The project is funded by the Coronavirus State and Local Fiscal Recovery Funds (SLFRF) program authorized by the American Rescue Plan Act. All funds must be obligated by 12/31/24 and expended by 12/31/26. See the link below for more information.

https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds

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

PROJECT PHASE	ESTIMATED DURATION (Calendar Days)
1. Site Access Approvals & Schedule Design Kick-off Meeting	**14**
2. Schematic Design Phase	**42**
• *Project Team & DPMC Plan/Code Unit Review & Comment*	14
3. Design Development Phase	**42**
• *Project Team & DPMC Plan/Code Unit Review & Comment*	14
4. Final Design Phase	**42**
• *Project Team & DPMC Plan/Code Unit Review & Approval*	14
5. Final Design Re-Submission to Address Comments	**7**

• *Project Team & DPMC Plan/Code Unit Review & Approval*	14
6. DCA Submission Plan Review	**30**
7. Permit Application Phase	**7**
• *Issue Plan Release*	
8. Construction Bid Phase	**42**
9. Construction Award Phase	**28**
10. Construction Phase	**180**
11. Project Close Out Phase	**30**

B. CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

This specific project has strict requirements to receive the SFRF funding and the Consultant shall be specific to implement a plan that will work to meet those dates within their written narrative of their proposal.

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

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.

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

Old Barracks Museum
101 Barracks Street
Trenton, New Jersey 08625

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: [redacted]
Address: Division of Property Management & Construction
[redacted]
Phone No:
E-Mail:

2. Client Agency Representative

Name: [redacted]
Address: Division Property Management & Construction
[redacted]
Phone No:
E-Mail:

VI. PROJECT DEFINITION

A. BACKGROUND

The Old Barracks Museum, also known just as the Old Barracks, is a historic building located at 101 Barracks Street in Trenton, Mercer County, New Jersey. The Old Barracks was constructed in 1758 to house British colonial troops during the French and Indian War and is the last remaining colonial barracks in the country. In 1973, the Old Barracks was designated a National Historic Landmark.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

In 2013, The Division of Property Management and Construction (DPMC) retained the services of Concord Engineering ("Concord") to evaluate the existing HVAC systems at the Old Barracks Museum. Concord's report is shown in **Exhibit 'C'**.

Concord provided three options. Option 1 would replace control end devices and controllers. Option 2, in addition to the equipment replaced in Option 1, would replace existing equipment, such as fan coil units, pumps, dehumidifiers and AHU-1. Option 3 would be a redesign of the entire HVAC system. Concord had concerns that a one for one equipment and controls replacement would not be enough to solve all of the HVAC concerns, especially with regard to preservation of historical artifacts in the building. The State shares these concerns. Consequently, the State is looking for a full HVAC redesign as per Option 3. If Option 3 presents too many difficulties, Option 2 is the default option.

An additional concern is that AHU-1 is located in a small space in the attic. To remove and replace it may require removal of a portion of the roof. A separate roof replacement project is currently in the planning stages. Coordination with this project may be a possibility but cannot be counted upon at this time.

A further concern is that the building is served by a two-pipe system (supply and return) fed from the Thomas Edison building next door that has to be switched every season between chilled water and hot water from Vicinity Energy. This does not allow for summer reheat from AHU-1 for dehumidification of the Exhibit Room. This system supplies chilled water to the fan coil units (FCU) in the cooling season and hot water to AHU-1 and FCU's in the heating season. There is a separate chilled water system (not from Thomas Edison) that supplies chilled water to the AHU-1 and dehumidifiers year round. Pumps for both systems are located in the Pump House in back of the building.

A recent changeover from hot to chilled water resulted in a blowout in the underground piping system. The State would like to explore the possibility of bringing in an additional separate two-

pipe system to eliminate the changeover of the existing pipes from hot to chilled water. The new pipes would be for chilled or hot water only as determined by the Consultant.

Drawings from Project P0496 to restore the Old Barracks in the 1990's and from a Historic American Buildings Survey will be provided to the Consultant.

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. DESIGN REQUIREMENTS

1. General

The Consultant shall review the Concord Engineering report entitled "Old Barracks Museum Controls Assessment" as shown in **Exhibit 'C'** and provide design, specifications, bid/award and construction administration services to upgrade the HVAC system at the Old Barracks Museum in Trenton, New Jersey.

The design documents shall provide details in the drawings and specification describing the methods and materials required by the contractors to interface the new equipment to the existing interior system components, as applicable.

A new air handler should incorporate a design that will address dehumidification during the summer months.

Provide the design for electrical supply, panels, breakers, etc. for new air handler units and ancillary equipment where required.

The specifications shall describe the preferred new air handler system or equipment and shall list the names of three equal manufacturers for each.

2. Structural Calculations

As applicable, one (1) set of signed and sealed structural calculations shall be provided to the DPMC Plan and Code Review Unit Manager indicating that the existing roof structural system is designed properly for the weight of the replacement HVAC units, curbing, supports, ductwork, etc.

The design drawings must indicate the size and dimensions of the new HVAC units and their related curbing, support fixtures, and structural components including the approved method of attachment to those components.

3. Demolition

Identify on the drawings any walls, ceilings, electric conduit, light fixtures and switches, data and telecommunication outlets, electrical junction boxes, panels, brackets, hangers and other obstructions required to be removed and/or be relocated in order to facilitate new construction.

Special demolition and removal procedures shall be identified in the design documents for the HVAC units that are to be replaced. Special procedures and required hours for electric utility shutdown and/or switchover during the HVAC unit removal and replacement shall be described and included in the design documents.

As applicable, provide temporary utilities to all equipment remaining in the areas during the demolition phase of the project including but not limited to electric, fire alarms, sprinkler systems, security and CCTV systems, lighting, HVAC piping & equipment, hot water piping & equipment, etc., in order to keep them fully functional during all phases of construction.

Procedures for the security of materials and equipment in the building during construction shall be established and included in Division 1 of the specification.

4. Noise & Dust Control

Provide a detailed drawing that depicts the location and dimensioned details for any temporary construction partition walls for security, plastic barriers for dust and dirt containment, and special covers for the equipment.

Describe the acceptable standards of cleanliness that the Contractor must meet each workday in all public access areas, hallways, elevators, rest rooms, and all other areas of the building.

Provide coverings on all furniture and cubicles as needed .All areas must be cleared of any dust and debris at the end of each work day. All smoke heads and sprinkler heads must be covered. The Contractor must work with the DPMC staff daily to put the alarm system on test to prevent any false alarms. Identify the methods for removal of debris.

Identify the procedures necessary to protect any smoke detector heads from dust and potential false alarms during the demolition work.

Identify the approved methods to remove the demolition material from the building, security policies of the building and security guard protection requirements, dumpster location and access for the removal of the materials from the property.

5. New Equipment

Delivery dates of the HVAC equipment specified must be obtainable to meet the projected completion date of the project. Documents shall include a requirement for the Contractor to minimize the HVAC system downtime.

The Consultant shall ensure that a factory representative is onsite for the start-up of the new HVAC equipment.

The Consultant shall provide riser diagrams to indicate locations and method of tie-in of all new HVAC & hot water utility and system circuits to the existing utility and system circuits.

6. Controls

Provide a design for a digital control system DDC for the proper operation of the HVAC units, their related components, and building temperature levels. Control items to address shall include, but not be limited to the following: thermostats, smoke detectors, HVAC fan motor shutdown, and interface with the existing fire detection system and fire alarm panel.

All system automatic electronic controls shall have a manual override feature.

7. Testing and Balancing

The Consultant shall, during the schematic design phase of its work, use its discretion and experience to determine whether HVAC System Testing and Balancing is needed in order to properly assess the function of the existing HVAC Systems. Such HVAC System Testing and Balancing shall be performed by a qualified firm. It is not required that such firm be pre-qualified with DPMC, however a NJ Business Registration Certificate will be required.

If it is necessary, as part of the design documents, the Consultant shall ensure that, following construction, the Contractor is required to hire a qualified HVAC Testing and Balancing firm, and such firm shall perform system tests to ensure that the HVAC system as installed performs as specified and designed. The design documents shall further require that the HVAC System Testing and Balancing firm shall produce a report setting forth its findings, adjustments, recommendations, and further that it shall certify that the HVAC system meets the design intent and will perform as specified and designed and that that all equipment, i.e., fans, controls, dampers, and devices requiring adjustments or regulation are properly installed, thoroughly cleaned, adjusted, or regulated for proper operation and free from objectionable noise and vibration. It is not required that such firm be pre-qualified with DPMC, however a NJ Business Registration Certificate will be required.

As part of Consultant's Construction Site Administration services it will oversee the Contractor's work and their hiring of a HVAC System Testing and Balancing firm. The Consultant shall further

ensure that any testing and balancing is performed in accordance with the current Association Air Balancing Council Standards or other State approved associations. Any system tests shall be observed and approved by the DPMC Project Manager and Code Group and a copy of the certified report and certification referred to above is to be provided to the DPMC Project Manager. The systems shall be maintained by the maintenance personnel in accordance with the report data and operating manuals provided by the Contractor.

8. Energy Rebates

The HVAC units shall be high efficiency units with the Consultant completing application for local energy rebates as described in Section IX, in this Scope of Work entitled "Energy Incentive Program".

B. STATE HISTORIC PRESERVATION OFFICE APPROVAL

The Consultant shall complete an "Application for Project Authorization Under the New Jersey Register of Historic Places Act" and submit it to the State Historic Preservation Office for review and approval prior to securing the required UCC permits.

The "Application for Project Authorization Under the New Jersey Register of Historic Places Act" can be found at: http://www.nj.gov/dep/hpo/2protection/sr_revapp_min.pdf

C. WATER SUPPLY UPGRADE ALLOWANCE

If a new chilled or hot water underground pipe is added to eliminate the need for a seasonal switchover, the Consultant shall show the dimensioned location of the new water line and all existing underground utility lines in that construction area. This information will eliminate the potential of the lines intersecting at critical crossing points. Drawings shall show the path of the new water line from the existing water main and shall indicate the size and length.

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

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

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

The Consultant shall estimate the costs associated with the potential requirement to design an upgrade to the building hot and chilled water supply system and enter that amount in the fee proposal line item entitled **"Water Supply Upgrade Allowance"**.

D. ROOF REMOVAL AND REPLACEMENT ALLOWANCE

If it is determined that removal and replacement of the AHU-1 in the attic also requires removal of a portion of the roof, the Consultant shall estimate the cost associated with the potential requirement to design for the removal and replacement of that portion of the roof and enter that amount in the fee proposal line item entitled **"Roof Removal and Replacement Allowance"**.

E. 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.

- DPMC Project P0496-00: **Restoration of the Old Barracks Phase II – Officers' Quarters**, March 17, 1995, Mesick Cohen Waite Architects
- DPMC Project P0496-01: **Site Utilities Phase IIA The Restoration of the Old Barracks**, July 1989, Mesick Cohen Waite Architects
- DPMC Project P0496-06: **Restoration of the Old Barracks Phase III – Mechanical**, November 1, 1995, Mesick Cohen Waite Architects
- DPMC Project P0496-07: The **Restoration of the Old Barracks Phase IV – Soldiers Barracks**, 30 Jan 97, John G. Waite Associates, Architects PLLC
- Historic American Buildings Survey, **The Old Barracks**

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.

VIII. PERMITS & APPROVALS

A. NJ UNIFORM CONSTRUCTION CODE PLAN REVIEW AND 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/

1. NJ Uniform Construction Code (NJUCC) Plan Review

Consultant shall estimate the cost of the NJUCC Plan Review by DCA and include that amount in their fee proposal line item entitled **"Plan Review and Permit Fee Allowance"**, refer to paragraph X.A.

Upon approval of the Final Design Phase Submission by DPMC, the Consultant shall submit the construction documents to the Department of Community Affairs (DCA), Bureau of Construction Project Review to secure a complete plan release.

As of July 25, 2022, the Department of Community Affairs (DCA) is only accepting digital signatures and seals issued from a third party certificate authority. The DCA ePlans site can be found at:

https://www.nj.gov/dca/divisions/codes/offices/ePlans.html

Procedures for submission to the DCA Plan Review Unit can be found at:

https://www.state.nj.us/dca/divisions/codes/forms/pdf_bcpr/pr_app_guide.pdf

Consultant shall complete the "Project Review Application" and include the following on Block 5 as the "Owner's Designated Agent Name":

The Consultant shall complete the NJUCC "Plan Review Fee Schedule", determine the fee due and pay the NJUCC Plan Review fees, refer to Paragraph X.A.
The NJUCC "Plan Review Fee Schedule" can be found at:

http://www.state.nj.us/dca/divisions/codes/forms/pdf_bcpr/pr_fees.pdf

2. NJ Uniform Construction Code Permit

Upon receipt of a complete plan release from the DCA Bureau of Construction Project Review, the Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections. The "Agent Section" of the application and certification section of the building sub-code section shall be signed. These documents, with **six (6) sets of DCA approved, signed and sealed construction 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 VIII.B.

3. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various "prior approvals" as defined by 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.

4. 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.

5. Special Inspections:

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

Bulletin 03-5 can be found at:

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

a. Definition:

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

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

b. Responsibilities:

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

B. OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS

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

The Consultant may refer to the Division of Property Management and Construction "Procedures for Architects and Engineers Manual", Paragraph **"9. REGULATORY AGENCY APPROVALS"** 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.

IX. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs available on the "New Jersey's Clean Energy Program" website at: http://www.njcleanenergy.com as well as New Jersey electric and gas utility websites 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" or utility approved rebates and incentives.

Consultant shall identify all rebates and incentives in their technical proposal.

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.

X. ALLOWANCES

A. PLAN REVIEW AND 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 **"Plan Review and Permit Fee Allowance"**, refer to Paragraph X.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. WATER SUPPLY UPGRADE ALLOWANCE

The Consultant shall estimate the costs associated with the potential requirement to design an upgrade to the building hot and chilled water supply system and enter that amount in their fee proposal line item entitled **"Water Supply Upgrade Allowance".**

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

C. ROOF REMOVAL AND REPLACEMENT ALLOWANCE

The Consultant shall estimate the cost associated with the potential requirement to design for the removal and replacement of that portion of the roof and enter that amount in the fee proposal line item entitled **"Roof Removal and Replacement Allowance"**.

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

XI. SOW SIGNATURE APPROVAL SHEET

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

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

SOW APPROVED BY: James Wright 7/6/2023
JAMES WRIGHT, MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY: M-M-D 07-06-23
MARK DAE, CHIEF, PROPERTY MANAGEMENT DATE
OFFICE OF BUILDING MANAGEMENT AND OPERATIONS

SOW APPROVED BY: Michael Ferrara 7-11-23
MICHAEL FERRARA, PROJECT MANAGER DATE
DPMC PROJECT MANAGEMENT GROUP

SOW APPROVED BY: Richard S Flodmand 7/18/23
RICHARD FLODMAND, DEPUTY DIRECTOR DATE
DIV PROPERTY MGT & CONSTRUCTION

XII. CONTRACT DELIVERABLES

The following are checklists listing the 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," 3.0 Edition, dated September 2022 available at https://www.nj.gov/treasury/dpmc/Assets/Files/ProceduresforArchitectsandEngineers.pdf for a detailed description of the deliverables required for each submission item listed. References to the applicable paragraphs of the "Procedures for Architects and Engineers" are provided.

Note that the Deliverables Checklist may include submission items that are "S.O.W. Specific Requirements". These requirements will be defined in the project specific scope of work and included on the deliverables checklist.

This project includes the following phases with the deliverables noted as "Required by S.O.W" on the Deliverables Checklist:

- **SCHEMATIC DESIGN PHASE**
- **DESIGN DEVELOPMENT PHASE**
- **FINAL DESIGN PHASE**
- **PERMIT APPLICATION PHASE**
- **BIDDING AND CONTRACT AWARD**
- **CONSTRUCTION PHASE**
- **PROJECT CLOSE-OUT PHASE**

XIII. EXHIBITS

A. SAMPLE PROJECT SCHEDULE FORMAT
B. PROJECT SITE LOCATION MAP
C. CONCORD OLD BARRACKS MUSEUM CONTROLS ASSESSMENT
D. PHOTOS

END OF SCOPE OF WORK

DPMC Project No.: A1390-00

Deliverables Checklist
Schematic Design Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
13.4.1.	A/E Statement of Site Visit						
13.4.2.	Narrative Description of Project						
13.4.3.	Building Code Information Questionnaire						
13.4.4.	Space Analysis						
13.4.5.	Special Features						
13.4.6.	Catalog Cuts						
13.4.7.	Site Evaluation						
13.4.8.	Subsurface Investigation						
13.4.9.	Surveys						
13.4.10.	Arts Inclusion						
13.4.11.	Design Rendering						
13.4.12.	Regulatory Approvals						
13.4.13.	Utility Availability						
13.4.14.	Drawings (6 Sets)						
13.4.15.	Outline Specifications (6 Sets)						
13.4.16.	Current Working Estimate/Cost Analysis						
13.4.17.	Project Schedule						
13.4.18.	Formal Presentation						
13.4.19.	Scope of Work Compliance Statement						
13.4.20.	Schematic Design Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Design Development Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
14.4.1.	A/E Statement of Site Visit						
14.4.2.	Narrative Description of Project						
14.4.3.	Building Code Information Questionnaire						
14.4.4.	Space Analysis						
14.4.5.	Special Features						
14.4.6.	Catalog Cuts						
14.4.7.	Site Evaluation						
14.4.8.	Subsurface Investigation						
14.4.9.	Surveys						
14.4.10.	Arts Inclusion						
14.4.11.	Design Rendering						
14.4.12.	Regulatory Approvals						
14.4.13.	Utility Availability						
14.4.14.	Drawings (6 Sets)						
14.4.15.	Outline Specifications (6 Sets)						
14.4.16.	Current Working Estimate/Cost Analysis						
14.4.17.	Project Schedule						
14.4.18.	Formal Presentation						
14.4.19.	Plan Review/Scope of Work Compliance Statement						
14.4.20.	Design development Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Final Design Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
15.4.1.	A/E Statement of Site Visit						
15.4.2.	Narrative Description of Project						
15.4.3.	Building Code Information Questionnaire						
15.4.4.	Space Analysis						
15.4.5.	Special Features						
15.4.6.	Catalog Cuts						
15.4.7.	Site Evaluation						
15.4.8.	Subsurface Investigation						
15.4.9.	Surveys						
15.4.10.	Arts Inclusion						
15.4.11.	Design Rendering						
15.4.12.	Regulatory Approvals						
15.4.13.	Utility Availability						
15.4.14.	Drawings (6 Sets)						
15.4.15.	Outline Specifications (6 Sets)						
15.4.16.	Current Working Estimate/Cost Analysis						
15.4.17.	Project Schedule						
15.4.18.	Formal Presentation						
15.4.19.	Plan Review/Scope of Work Compliance Statement						
15.4.20.	Final Design Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Permit Application Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
16.1.	N.J. UCC Permit Application						
16.4.	Drawings, Signed and Sealed (6 Sets)						
16.5.	Specifications, Signed and Sealed (6 Sets)						
16.6.	Current Working Estimate/Cost Analysis						
16.7.	Project Schedule						
16.8.	Plan Review/Scope of Work Compliance Statement						
16.9.	Permit Application Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC Project Manager the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Bidding and Contract Award Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
17.1.1.	Notice of Advertising						
17.1.2.	Bid Proposal Form						
17.1.3.	Bid Clearance Form						
17.1.4.	Drawings (6 Sets)						
17.1.5.	Specifications (6 Sets)						
17.1.6.	Construction Schedule						
17.3	Pre-Bid Conference/Mandatory Site Visit						
17.3.1.	Meeting Minutes						
17.4	Bulletins						
17.5	Post Bid Meeting						
17.6.	Contract Award "Letter of Recommendation"						
17.8.	Bid Protests - Hearings						
17.9.	Bidding and Contract Award Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Construction Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
18.2.	Pre-Construction Meeting						
18.3.	Submittal Log						
18.4.	Construction Schedule						
18.5.	Project Progress Meetings						
18.7.	Contractor's Invoicing and Payment Process						
18.8.	Contractor Submittals						
18.10.	Testing						
18.11.	Shop Drawings (6 Sets)						
18.12.	As-Built & Record Set Drawings (6 Sets)						
18.13.	Change Orders						
18.14.	Construction Photographs						
18.15.	Field Observations						
18.17.	Construction Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

DPMC Project No.: A1390-00

Deliverables Checklist
Project Close-Out Phase

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
19.3.	Development of Punch List and Inspection Reports						
19.5.	Determination of Substantial Completion						
19.6.	Correction/Completion of Punch List						
19.7.	Submission of Close-Out Documentation						
19.7.1.	As-Built and Record Sets of Drawing (6 Sets)						
19.8.	Final Payment						
19.9.1.	Contractors Final Payment						
19.9.2.	A/E's Final Payment						
19.10.	Project Close-Out Phase Deliverables Checklist						
S.O.W. Reference	**S.O.W. Specific Requirements**						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

_____ _____

Consultant Signature Date

February 7, 1997
Rev.: January 29, 2002

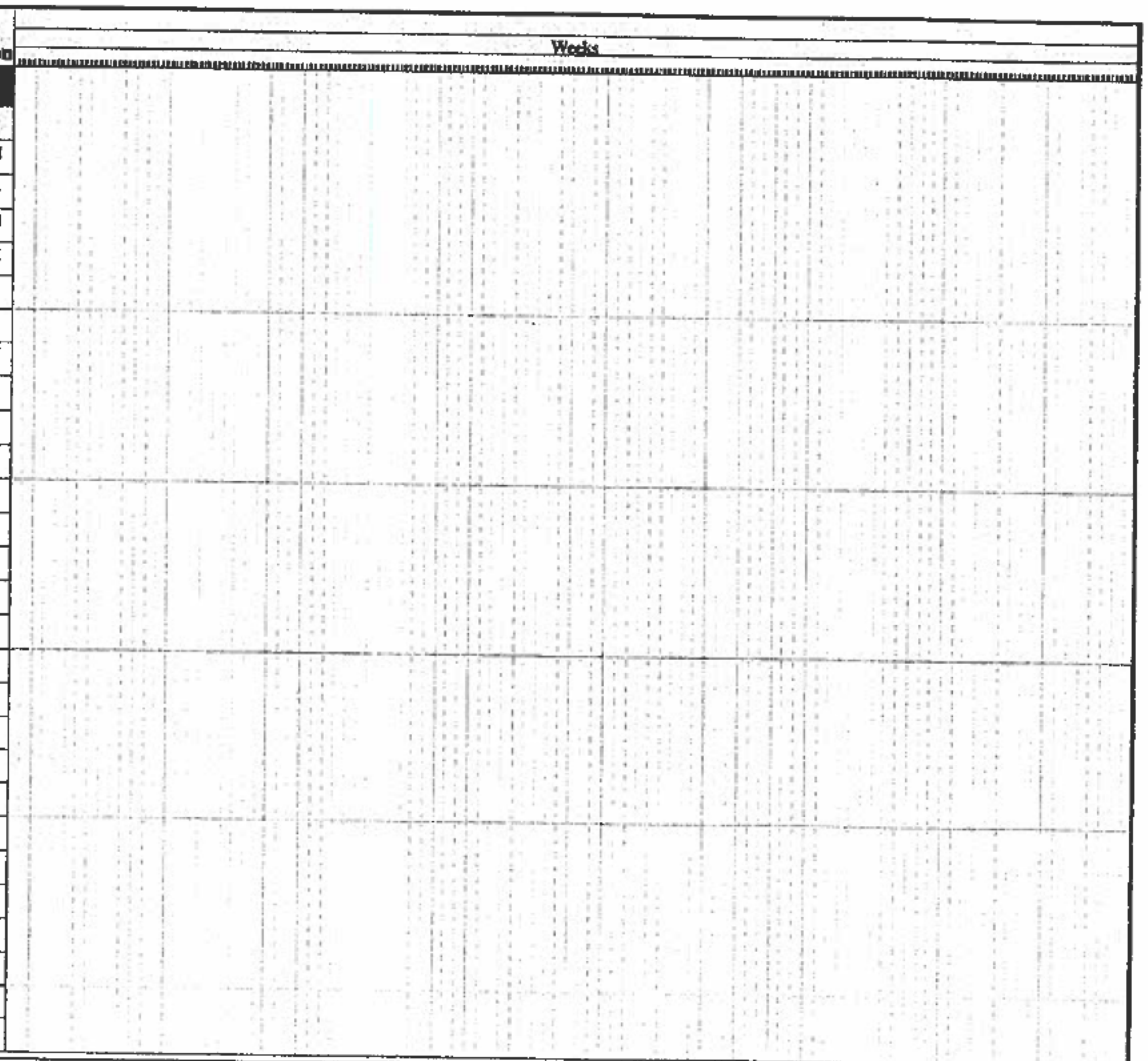
Responsible Group Code Table

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.

CODE	DESCRIPTION	REPORTS TO ASSOCIATE DIRECTOR OF:
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
<PROJ>		
Design		
CV3000	Schedule/Conduct Predesign/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 Submitl for Constructability	OCS



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

DBCA - TEST

Sheet 1 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

Activity ID	Description	Rspn	Weeks
CV3055	Review & Approve Final Design Submittal	CM	
CV3056	Consolidate & Return Final Design Comments	CM	
CV3060	Prepare & Submit Permit Application Documents	AE	
CV3068	Prepare & Submit Bidding Cost Analysis (DPMC-38)	CM	
Plan Review-Permit Acquisition			
CV4001	Review Constr. Documents & Secure UCC Permit	PR	
CV4010	Provide Funding for Construction Contracts	CA	
CV4020	Secure Bid Clearance	CM	
Advertise-Bid-Award			
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	
Construction			
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	

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

DBCA - TEST

Sheet 2 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

Activity ID	Description	Rspn	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	

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

DBCA - TEST

Sheet 3 of 3

Bureau of Design & Construction Services

EXHIBIT 'A'

Project Site Location Map

Old Barracks Museum

EXHIBIT 'B'

ENGINEERING

June 28, 2013

[redacted]gement and Construction

RE: OLD BARRACKS MUSEUM CONTROLS ASSESSMENT
CEG PROJECT No. 4C13039.00

Old Barracks Museum Building Overview

The Old Barracks Museum building was originally built in 1786 during the French and Indian War. The building was used as a hospital during the American Revolution. The building currently serves as a private museum with historical artifacts on display that they utilize to educate the public on Colonial and American history. In order to ensure proper preservation of the artifacts, the building requires proper temperature and humidity control. The building was fully restored between the years of 1995 and 1998. The mechanical equipment currently operating within the building was installed in 1998. During the past few years, the control system front end has been upgraded by Johnson Controls, but that did not include any new control end devices or graphics. The facility currently has a service contract with CM3 to evaluate and provide limited maintenance repairs on an as needed basis.

Old Barracks Existing Equipment and Systems

The Old Barracks Museum building is served by the following main pieces of equipment:

Air Handling Unit - AHU-1

This AHU distributes air to the critical portion of the museum that requires specific temperature and humidity control. This unit has:

- Chilled water and hot water coils with 3-way electronic modulation control valves.
- An electric duct heater to pre-condition the outside air.
- A duct mounted packaged steam humidifier.

Fan Coil Units (Approximately 71)

The fan coil units (FCU) condition the remainder of the building. The majority of the units are located under window sills, although some of the units are located in fake fireplaces which are very difficult to access. These units:

[redacted]

EXHIBIT 'C'

- Have 2-Pipe coils that provides either cooling or heating depending on the current operating season and when the changeover occurs.
- Each unit has an electronic 3-way modulating control valve.
- Fans are single stage on or off with no high or low function.

A majority of the building distribution system serving the fan coils is located under the basement floor in a shaft that is only accessible through installed floor panels.

Dehumidifiers (13)

There are approximately (13) dehumidifiers located throughout the building which are interconnected to the control system. These units have:

- 3-way modulating control valves.
- A single stage fan that operates when in the occupied mode.

Chilled Water System

There are (3) chilled water pumps that provide chilled water to the building. The chilled water pumps are located in a building exterior to the museum called the Pump House. All chilled water used by the Old Barracks Museum Building is provided by the Veolia Central Plant which is fed through the neighboring Thomas Edison Building. All piping from the Thomas Edison Building and piping from the Pump House to the Museum is all fed underground.

Hot Water System

There are (2) hot water pumps that provide hot water to the building. The hot water pumps are located in the Pump House along with the chilled water pumps. All of the mechanical hot water used in the Old Barracks Museum Building comes from the neighboring Thomas Edison Building. All piping from the Thomas Edison Building and piping from the Pump House to the Museum is all fed underground.

Building Automation System

All of the above listed equipment is served by a BACnet direct digital control system that was installed in 1998 during a major renovation. The system contains one main controller and three other controllers that control all of the HVAC equipment. The main server was recently upgraded by Johnson Controls but the upgrade did not include any improvements to the end control devices or the building front end graphics. The installing contractor failed to install and utilize the trending capabilities of the software which the maintenance staff can utilize to

[redacted]

evaluate the performance of the building.

Old Barracks Museum Controls Assessment

The current BAS consists of a Johnson BACnet direct digital control system that ties into the installed front end. Many of the points on the front end have been overridden or no longer communicate with the equipment controllers making it difficult to control the system from the front end.

Hydronic Pumps

- The Johnson Control front end commands the pumps on a lead/lag basis with the option to provide a rotatable schedule to ensure even pump use.
- The pumps are constant volume so the pumps do not utilize VFDs for pump output control.

During the onsite review, it was noticed that different pumps were running than what the building automation system was commanding. It appears the maintenance staff has put the pump control into the manual mode due to problems with the pumps.

AHU-1

- When in the occupied mode, AHU-1 attempts to maintain a space temperature setpoint of 68°F by modulating the damper actuators and the hot and chilled water control valves.
- When the economizer function is favorable based upon the needs of the space and ambient conditions, the unit will enter the economizer function to utilize free cooling.
- When the space requires cooling and the conditions are not favorable for economizer, the chilled water valve will modulate to maintain the desired space temperature setpoint of 68°F.
- The electric duct heater will heat the entering outside air coming into the building in order to maintain a specific mixed air temperature.
- When the space requires heating, the hot water valve will modulate to maintain a space temperature setpoint of 68°F.
- Since the piping system is only a two pipe system, the air handler is only able to use either chilled or hot water depending on the season and the current mode of operation. This makes it difficult to control the space during the swing seasons when the current mode of the two pipe system does not meet the needs of the space.
- The unit is also designed to maintain a space humidity setpoint utilizing a dehumidification sequence and a humidifier that is located in the supply duct directly after the unit.

Space sensors for humidity control have physically been installed inside the space but no points are evident on the building automation system. It appears as if the humidity control sequence has been eliminated from the control logic which may be a result of the equipment malfunctioning.

[redacted]

EXHIBIT 'C'

The end devices on the air handler such as control valves and damper actuators are original from the equipment install.

FCUs

- The controls activate the fan coil units based upon an installed schedule.
- When in the occupied mode, the fan continuously runs circulating air in the space.
- Once the space falls below the temperature setpoint in heating and gets above the temperature setpoint in cooling, the three-way valve modulates to provide tempered water flow through the coil.
- The space temperature is sensed by local temperature sensors that do not provide any local control or deviation from setpoint.
- Once the space has reached its temperature setpoint, the control valve will modulate closed and the water will no longer flow through the coil.
- Logic has been programmed into the controls to ensure the control valve does not modulate when the supply water is not the temperature needed to satisfy the space which is very important during the swing months.

The fan coil units provide the majority of space tempering for the building. The control devices on the fan coil units are original to the installation back in 1998 when they were installed. The control valve and control valve should be replaced on each fan coil unit during a controls upgrade. Overtime the control board and unit control board become antiquated requiring replacement. It is not cost efficient to periodically replace the control valves and control boards due to consistent service calls to the maintenance contractor.

Dehumidifiers

- The dehumidifiers were installed to control the space from ever getting above 40% relative humidity during the summer months.
- The dehumidifiers have a three-way modulating cooling valve that modulates to maintain the space humidity setpoint of 40% relative humidity.
- The dehumidifiers have been placed on a schedule and run when in the occupied mode. It is unknown why they would not choose to dehumidify around the clock during the summer.
- Each dehumidifier has its own control board which controls the cooling valve and the space humidity.

The dehumidifiers were all shut down during our site visits. The staff has indicated that the dehumidifiers have not operated in years. The maintenance staff has indicated that the dehumidifiers never properly functioned and they were far too loud when operating. We were not able to evaluate the controls of the dehumidifiers since they are not utilized.

[redacted]

EXHIBIT 'C'

Building Automation System

- The recent upgrade of the front end system by Johnson did not include a graphics package so in order to change any setpoints or to view the system, the user needs to navigate the points list which is somewhat cumbersome if you are not used to operating the system.
- Some of the points are offline or are overridden by the operator. This is problematic because when a unit loses communication with the front end system it is difficult to determine what mode it is operating in. Operator override is not a normal mode of operation and should only be used for temporary correction.

The front end system has been installed recently by Johnson, but it appears as if many of the end devices that it communicates with may require repair or replacement as they do not consistently communicate proficiently.

Old Barracks Museum Equipment Assessment

During site investigations it was noticed that the equipment was not operating proficiently to maintain space temperature setpoints provided by the BAS. Some of the areas of the building require specific temperature and humidity control to ensure preservation of historical artifacts. Some of the equipment that is not operating correctly serves these areas of the building and should be given particular attention.

AHU-1

AHU-1 was installed to handle the air distribution and climate control for the main museum room on the second floor that requires consistent temperature and humidity control. The design intent for the unit was to maintain a space temperature of 68°F and 40% relative humidity throughout the entire year. Currently the equipment no longer operates proficiently. Examples of this lack of proficient operation are:

- The electric duct heaters, which were designed to temper the outside air coming into the mixed air plenum and provide heating when the piping system has been changed over to cooling mode, no longer function.
- The duct mounted humidifier no longer operates as the unit is disassembled and secured from power. It appears that the unit has not been operating for some time as the new front end does not even pull in the humidity readings for the space or provide any commands to the humidifier within the control logic.
- The air handler is roughly 15 years old and has not been well maintained as the fan blower bearings have not been greased and the filters do not appear to be changed regularly.
- During onsite investigations the space was 15°F under zone temperature setpoint and the HVAC pipe system was still in the heating mode. The outside air temperature during testing was 49°F which indicates the space could have been much worse if outside temperature conditions were lower.

[redacted]

EXHIBIT 'C'

- The controls have night setback control points but these cannot be used since the space needs to maintain temperature 24 hours a day.

The BAS was attempting to command the controls to bring the space up to the temperature setpoint by commanding the valve to 100% open and the electric pre-heater to the on position. Since the pre-heater does not function properly, the AHU may struggle to maintain space temperature as part of the heating capacity does not function properly. It has also not been determined if the one hot water pump that is functioning has enough capacity to meet the demand of the building's equipment. In addition, the loop water that day during testing was only 132°F which is a little low for ideal heating conditions. Unfortunately the BAS cannot control the temperature of water being delivered to the building.

FCUs

The FCUs were designed to provide either heating or cooling to the remainder of the building based on the season of operation. Since the fan coils are only two pipe, the mode of operation of the piping system will dictate whether or not the unit is capable of providing heating or cooling. This makes the controls sequence of operation difficult to perform its intended operation during the swing months when the system has been changed over to heating or cooling and the outdoor conditions are not favorable to the current mode of operation.

- A majority of the FCU's have been installed under the windows in cabinets that are fairly accessible for routine maintenance such as filter changing or valve repairs. Any issues beyond simple maintenance pose a problem as the access to most units is not sufficient enough to replace a coil or fan motor.
- Some of the FCUs have been installed inside fake fireplaces which are very difficult to access for maintenance or repairs. Most of the units in the fireplaces are not operating because they are too hard to access for repairs.
- One section of the building is experiencing extreme flow issues and the space is not able to be heated or cooled efficiently. There is a drastic temperature difference in that section of the building. It appears as if the FCUs in that section are not receiving any flow at all. This section of the building is the end of the line for the HVAC piping for the building.
- The units were installed in 1998 so they are approaching their expected lifespan of 15 years.
- The units are not being maintained very well. The filters are extremely dirty and the fan blowers are extremely dirty restricting airflow. The general condition of the units shows lack of maintenance and end of the equipment life cycle.
- There are a few different brands of units within the building. It appears as if some of the units have been replaced over the years since the original installation. Different units can provide a problem when attempting to reuse an existing controller since the programming required for a different brand of a unit may vary from the original programming requirements.
- Each FCU has a modulating three-way valve that either provides flow through the coil if required or bypasses the unit. The control valve is an electronic valve tied into the onboard controller. A majority of the electronic control valves are original to the

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installation back in 1998. CM3 has replaced some of the valves under their maintenance contract.

- The control logic has some inconsistencies with the FCUs. During our onsite evaluation the HVAC piping system was still in heating mode and the building was cold in the morning when first evaluating the system. Most of the FCUs were well below the zone temperature setpoint but they were all not being commanded to provide heating. Some of the FCUs were well below the temperature setpoint but the control valve was not being commanded on by building automation system to provide heat to the space. There needs to be some work put into the logic on the front end to ensure each FCU operates consistently.

Currently it appears as if there is an apparent flow problem considering the fan coils at the end of the line are not receiving flow. A proper evaluation, including an hydraulic analysis, of the current system needs to be performed to determine why the FCUs at the end of the line are not receiving adequate flow for space temperature control.

Pumps

Currently the building operates with three chilled water pumps and two hot water pumps. During onsite evaluation one heating pump was operating in manual mode as the control system was calling for the other heating pump to run. It appears as if there could be a problem with the other heating pump which is why one of the pumps is running continuously in the manual mode.

- The pumps are located in a shed exterior to the building that is also used for storage. The shed is not in very good condition and the access for pump maintenance is not very good.
- The two hot water pumps appear to fairly old and in bad condition. The pumps have been installed above one another and the top pump has been valved off indicating a problem exists with the pump. In addition, the bottom pump has a fairly new motor installed which is probably a result of the top pump leaking onto the motor for the bottom pump.
- The three chilled water pumps were not running during the site inspections as the building was still operating in the winter mode. The three pumps appear to have been serviced recently considering the protective covers are all removed from the pumps providing access to the seals and couplers. The pumps appear to be in much better condition than the hot water pumps.
- All pumps are constant volume and are supposed to operate on a rotating lead/lag schedule by the building automation system. However, since the hot water pumps were running in manual due to a problem with the other pump, the building automation software cannot properly implement the control of the pumps.

The pumps operate as constant volume pumps providing either heating or cooling to the building based upon the mode of operation set by the building maintenance staff. The pumps provide water to the FCUs, AHU-1 and Dehumidifiers that all utilize three-way valves.

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Dehumidifiers

The dehumidifiers could not be evaluated during the time of our site visits due to the equipment being shut down and not in use.

Building Automation System

Currently Johnson Controls end devices are installed on all of the equipment. A majority of the controllers and valves are original from the initial installation in 1998.

- The current equipment controllers are Johnson Unitary Controllers which are meant for small packaged units with minimal input/output points. These controllers are fully programmable but are being phased out of the control industry so obtaining parts or replacement is becoming more difficult.
- The end devices are reaching the end of their expected life span and will require replacing as the components go bad and stop functioning properly. The modulating control valves on the FCUs have begun to fail and required replacement by CM3 during their control maintenance visits.
- The room sensors installed do not provide any local control or temperature adjustment. The sensors may need calibration as over a period of time their sensing accuracy declines.
- The BACnet electronic controllers are original to the installation in 1998. There are three sub-control panels and one primary panel that provides the connection between the front end and the building equipment. Obtaining parts for these main controllers will become difficult as time goes on and technology evolves.

The control software and main controllers are currently working adequately. The primary concern is when will the controllers begin to cause problems. Since this building houses historical artifacts, a sudden drop out of the system could pose a threat to the condition of the artifacts.

Old Barracks Museum Recommendations

Option #1 – Replace Control End Devices and Controllers

Many of the end control devices and controllers were installed in 1998 and are beginning to fail causing improper operation of the equipment. Since the front end system is fairly new, the replacement of control end devices and controllers would bring the entire control system to 2013 control standards.

FCUs

- Each FCU would require a new controller and modulating control valve. A new controller may be able to utilize the existing wiring but that would need to be determined by the installing contractor. The controls contractor would need to provide new wiring to the modulating control valve and program each controller with the required sequence of

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operation. The control valve would need to be properly spanned so the coil only gets the design GPM when fully open.

- A new space thermostat should be installed that would include a local adjustment option of +/- 2°F to allow the occupants to adjust the space conditions locally to some extent. The existing wiring could be re-utilized to avoid damaging any finished walls. The thermostats will need to be calibrated so they monitor the space temperature correctly.
- Discharge air temperature sensors should be installed for each FCU to make it easier to determine if the FCU is operating properly or not from the front end.

AHU-1

- New modulating two-way valves would be required on the chilled and hot water loops. New wiring should be installed from the new valves to the unit controller.
- A new unit controller should be installed for the unit. The wiring for the controller should be replaced to the air handler but the wiring going to the main controller should be re-utilized.
- New sensors would need to be installed for the mixed air temperature, filter differential pressure, pre-heat temperature, discharge air temperature, water supply temperature, return temperature, space temperature, space humidity, supply CFM, etc.
- New end switches and relays would need to be installed for the supply fan, the damper actuators, control valves, filter status, exhaust fan, humidifier and the electric duct heater. Logic would need to be programmed into the control software for the humidifier.
- The new controller would need to be programmed with the correct sequence of operation based upon the design intent of the unit.
- New space temperature sensors and humidity sensors need to be installed and properly calibrated.

Dehumidifiers

Currently the dehumidifiers are not being utilized to control the humidity in the space as originally designed. If determined that the dehumidifiers would be used again in the future, below is a list of devices that would need to be installed.

- A new controller would need to be installed for each unit. The controller would need to be programmed with the correct sequence of operation and tested using the building automation software.
- A new modulating control valve would need to be installed to be used during the summer operation.
- The existing wiring for the equipment controller back to the sub-controller could still be utilized but the wiring from the controller to the unit and control valve should be replaced.
- A new space humidity sensor should be installed and wired back to the equipment controller.

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- A discharge air temperature sensor should be installed to make it easier to determine if the dehumidifier is operating properly.

Pumps

- The five pumps would require a new sub-control panel to be installed to provide communication back to the main controller. The existing wiring from the current sub-panel to the main controller should be utilized. The wiring from the new sub-control panel to the control end devices at the pumps should be replaced.
- New end switches and relays need to be installed at the pumps to properly enable and disable the pumps according to the sequence of operation.
- New temperature sensors for supply and return temperatures need to be installed and mapped to the BAS.

Main Controller

- The main controller which is connected directly to the front end would need to be replaced. All existing wiring from the sub-control panels should be utilized is possible.

Budget Pricing

- To replace all controllers, control valves and replace the front end system with a new system containing a graphics package; we estimate $375,000. This estimate is extremely rough without seeing the difficulties trying to run new wiring. Please keep in mind this estimate includes only a controls upgrade and assumes that all equipment is in good working order. Also this estimate includes controlling all equipment including the dehumidifiers which currently are not used by the maintenance staff.
- Concord only provided budget pricing for this option as the below options will require additional evaluation and system engineering. We are willing to discuss the other options and provide high level dollar values but this option was the only one we were able to fully estimate.

Add Option #1

To better streamline building evaluation and control, remote access to the building automation software should be installed. This can be achieved by connecting the system to a high speed internet connection and provide a web based platform for the front end system to operate on. This would allow building maintenance staff to view the building remotely to diagnose any issues or to evaluate how the building is operating on any given day. The internet connection for the Barracks would need to be upgraded as they are currently using DSL which is not a fast enough internet connection to install the web based platform.

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Option #2 – Replace Existing Equipment and New Control End Devices

Option #2 would be to perform option #1 in addition to replacing the existing HVAC equipment. The equipment currently running has either reached the end of its life cycle or has been not very well maintained as specific pieces of equipment are not operating. The replacement would be a 1 for 1 replacement which would include;

- Approximately 71 fan coil units.
- AHU-1 with a new electric duct heater and humidifier.
- Three new chilled water pumps.
- Two new hot water pumps.
- 13 new dehumidifiers.
- 5 pump starters
- New instrumentation including pressure gauges, temperature gauges, etc.

This option would include utilizing existing equipment locations, ductwork and piping. This would prevent major renovation work since the life expectancy of ductwork and piping will outlast the new equipment life cycles.

Option #3 – Redesign the Mechanical System Based on Building Needs

Based upon our review and analysis, Concord has determined that the building could benefit from a system re-design performed by a professional engineering staff based on the current building needs. During a redesign, the engineering staff would properly evaluate the building's needs, occupancy, feasibility, efficient control and long term building solutions. The goal for this building would be to provide an energy efficient system that could be installed with minimal disturbance to the historic aspects of the building.

Based upon the recommendations of *ASHRAE 2011 Chapter 23 HVAC Applications*, museum of historical artifacts require special consideration during mechanical design that creates "ideal" setpoints to improve preservation index (PI). The PI is a calculated value based upon the environment conditions and the organic material being preserved. This takes into consideration the type of material being preserved as well as the building conditions to fully understand and develop "ideal" setpoints for temperature and humidity to improve the length of preservation. During re-design, the engineer should determine the "ideal" setpoints and design a system that is capable of maintaining these setpoints during all seasons. The engineer will need further information on the materials being preserved and may need to consult with a preservation specialist to determine the "ideal" conditions for successful preservation.

Additional Considerations

- During onsite investigations, Concord witnessed the system on a very cold day and it was quite obvious that the system was struggling to maintain temperature setpoints. After reviewing the front end, it was determined that the water being supplied by Veolia

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through the Edison building was not hot enough to successfully heat the building.

- Part of the building is having obvious flow issues which Concord was unable to determine if a piping issue exists or an issue with the pump capacity.
- Due to the age of the building, the building envelope is not air tight increasing the load on the system. The system load may require additional heating/cooling capacity to overcome the air leakage in the building.

Old Barracks Museum Conclusion

After a full review of the controls and a brief evaluation of the total system, Concord has concluded that the building should be further evaluated by a mechanical engineer. Due to the issues seen with water flow and air penetration, the system may require additional engineering and problem solving to ensure the current system design will successfully condition the space as required. Concord is fearful that a one for one equipment and controls replacement may not solve the consistent comfort complaints and staff concerns regarding the preservation of the historical artifacts. Historical artifact preservation requires not only a specific temperature and humidity range but also the conditions need to be consistent as fluctuations can damage these artifacts. *ASHRAE 2011 Chapter 23 HVAC Applications* offers specific temperature and humidity guidelines for museum spaces so the current system design needs to be evaluated and re-designed to ensure proper historical artifact preservation. Concord Engineering is more than willing to discuss other options available to improve total system performance.

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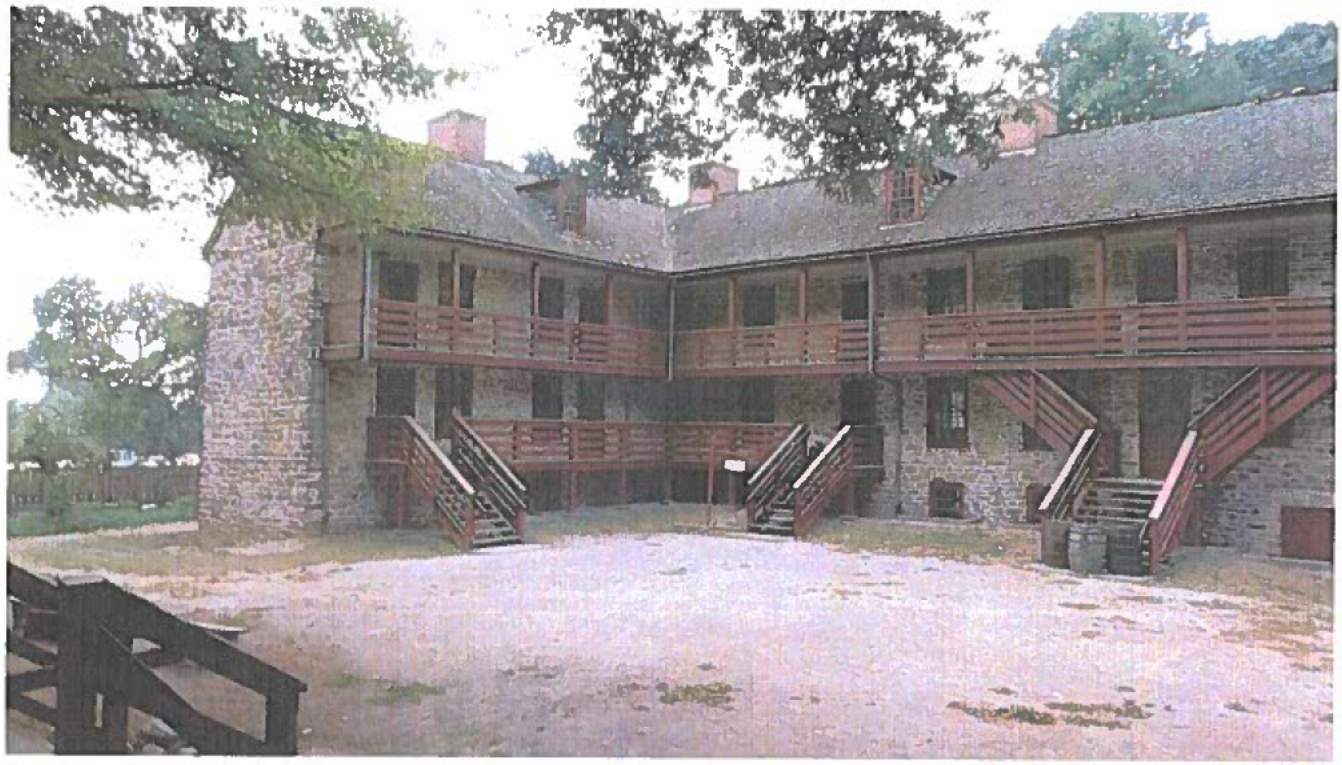
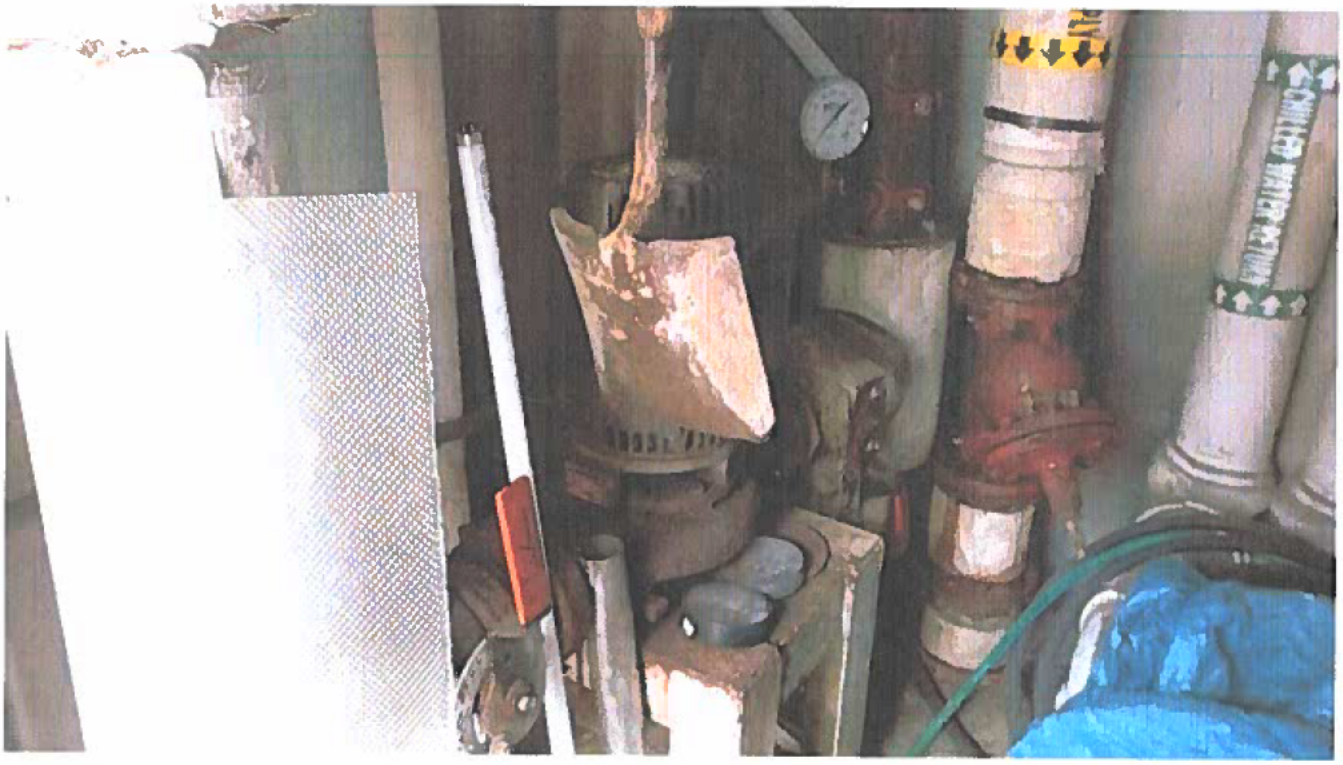


Old Barracks Museum

EXHIBIT 'D'

North side location of underground piping. Pump House in back (top photo)

EXHIBIT 'D'



Pumps in Pump House.

EXHIBIT 'D'

Typical Fan Coil Units.

EXHIBIT 'D'