Harriman

DDPC

IF&W Building Window Replacement

Bangor, Maine

Project No. 23113
BGS No. 3666

March 28, 2024

Construction Documents

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PROFESSIONAL SEAL PAGE

Architect
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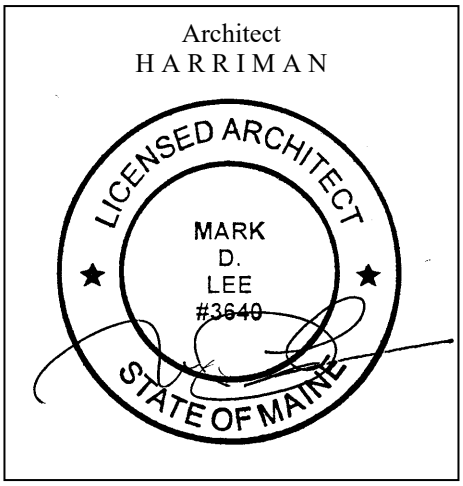

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DOROTHEA DIX PSYCHIATRIC CAMPUS
IF&W BUILDING
WINDOW REPLACEMENT
BANGOR, MAINE
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00 11 13
Notice to Contractors

DDPC - IF&W Window Replacement BGS #: 3666

The Bureau of General Services (BGS) is conducting a competitive bid process for the Window Replacement Project at the IF&W Building in Bangor, Maine.

The former "IF&W" building is located on the western edge of the Dorothea Dix Psychiatric Center Campus in Bangor. The four story masonry building has 140 windows. The associated Scope includes full removal of existing window, replacement of rough opening blocking, installation of new windows and repair of interior returns. Work is estimated to begin in June of 2024.

The contract shall designate the Substantial Completion Date on or before (6) six months after contract is *awarded*, and the Contract Final Completion Date on or before (9) months after contract is awarded.

1. Submit bids on a completed Contractor Bid Form (section 00 41 13) provided in the Bid Documents, include bid security when required, and scan each item as an attachment to an email addressed to: BGS.Architect@Maine.gov, so as to be received no later than **2:00:00 p.m.** on ***April 23, 2024***. The email subject line shall be marked "**Bid for *DDPC - IF&W Window Replacement***".

   Bid submissions will be opened and read aloud at the time and date noted above at the Bureau of General Services office, accessible as a video conference call. Those who wish to participate in the call must submit a request for access to BGS.Architect@Maine.gov.

   Any bid received after the noted time will not be considered a valid bid and will remain unopened. Any bid submitted by any other means will not be considered a valid bid. In certain circumstances, the Bureau of General Services may require the Bidder to surrender a valid paper copy of the bid form or the bid security document. The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

2. Questions and comments on the *bid opening process* shall be addressed to: Joseph H. Ostwald, Director, Division of Planning, Design & Construction, Bureau of General Services, 77 State House Station, Augusta, Maine 04333-0077, BGS.Architect@Maine.gov.

3. Questions and comments regarding the *project* design specifications or drawings shall be directed in writing to the Consultant during the bid period prior to the question and comment deadline of 5:00 p.m. on *April 15, 2024*.

   The contact for project related questions to be includeded in the Addendum are to be addressed to BGS.Architect@Maine.gov with the project name and BGS number in the subject line.
   The Addendum, if required, will be issued by 5:00 on April 18, 2024.

4. ☒ Bid security is required on this project.
   The Bidder shall include a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with the completed bid form submitted to the Owner. The Bid Bond form is available on the BGS website.
   or
   ☐ Bid security is not required on this project.

5. ☒ Performance and Payment Bonds are required on this project.
   If noted above as required, or if any combination of Base Bid and Alternate Bids amounts selected in the award of the contract exceeds $125,000.00, the selected Contractor shall furnish a 100% contract Performance Bond (section 00 61 13.13) and a 100% contract Payment Bond (section 00 61 13.16) in the contract amount to cover the execution of the Work. Bond forms are available on the BGS website.
   or
   ☐ Performance and Payment Bonds are not required on this project.

6. Filed Sub-bids *are not required* on this project.

7. ☐ Pre-qualified General Contractors are utilized on this project.
   insert the company name, city and state for each
   or
   ☒ Pre-qualified General Contractors are not utilized on this project.

8. ☒ An on-site pre-bid conference (☒ *mandatory* or ☐ *optional*) will be conducted for this project.
   The pre-bid conference is intended for General Contractors. Subcontractors and suppliers are welcome to attend. Contractors who arrive late or leave early for a mandatory meeting may be prohibited from participating in this meeting and bidding.
   April 10, 2024 at 10:00am
   The group will meet and sign-in at the Dorothea Dix Psychiatric Campus main entrance parking lot located at 656 State Street, Bangor, then proceed to the IF&W site.

   or
   ☐ An on-site pre-bid conference will not be conducted for this project.

9. Bid Documents - full sets only - will be available on or about *March 28, 2024* and may be obtained *as a downloadable PDF at no cost on the BGS website. Website link* from:
   https://www.maine.gov/dafs/bgs/business-opportunities
   Invitation for Bids

10. Bid Documents may be examined at:

AGC Maine
188 Whitten Road
Augusta, ME 04330
Phone 207-622-4741 Fax 207-622-1625

Construction Summary
734 Chestnut Street
Manchester, NH 03104
Phone 603-627-8856 Fax 603-627-4524

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SECTION 000200 - INFORMATION AVAILABLE TO BIDDERS

PART 1 GENERAL

1.1 INFORMATION FOR BIDDERS

A. Existing Documents

1. A digital copy of the existing facility assessment final report: Dorothea Dix Psychiatric Center (DDPC) Building Survey Findings - October 19, 2022 furnished by the Owner are to be provided for reference.

END OF SECTION 000200

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00 21 13
Instructions to Bidders

1. Bidder Requirements

1.1 A bidder is a Contractor which is evidently qualified, or has been specifically pre-qualified by the Bureau of General Services, to bid on the proposed project described in the Bid Documents.

1.2 Contractors and Subcontractors bidding on projects that utilize Filed Sub-bids shall follow the requirements outlined in these Bid Documents for such projects. See Section 00 22 13 for additional information.

1.3 Contractors and Subcontractors are not eligible to bid on the project when their access to project design documents prior to the bid period distribution of documents creates an unfair bidding advantage. Prohibited access includes consultation with the Owner or with design professionals engaged by the Owner regarding cost estimating, constructability review, or project scheduling. This prohibition to bid applies to open, competitive bidding or pre-qualified contractor bidding or Filed Sub-bidding. The Bureau may require additional information to determine if the activities of a Contractor constitute an unfair bidding advantage.

1.4 Each bidder is responsible for becoming thoroughly familiar with the Bid Documents prior to submitting a bid. The failure of a bidder to review evident site conditions, to attend available pre-bid conferences, or to receive, examine, or act on addenda to the Bid Documents shall not relieve that bidder from any obligation with respect to their bid or the execution of the work as a Contractor.

1.5 Prior to the award of the contract, General Contractor bidders or Filed Sub-bidders may be required to provide documented evidence to the Owner or the Bureau showing compliance with the provisions of this section, their business experience, financial capability, or performance on previous projects.

1.6 The selected General Contractor bidder will be required to provide proof of insurance before a contract can be executed.

1.7 Contracts developed from this bid shall not be assigned, sublet or transferred without the written consent of the Owner.

1.8 By submitting a bid the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Director of the Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.

1.9 The Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

1.10 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

2. Authority of Owner

2.1 The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

2.2 Subject to the Owner's stated right to accept or reject any or all bids, the Contractor shall be selected on the basis of the lowest dollar value of an acceptable Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications the Owner determines may best serve the interests of the Owner. An acceptable bid is a duly submitted bid from a responsive and responsible bidder.

2.3 The Owner reserves the right to require Bid Bonds or Performance and Payment Bonds for any project of any contract value.

3. Submitting Bids and Bid Requirements

3.1 Each bid shall be submitted on the forms provided in the Bid Documents.

3.2 Each bid shall be valid for a period of thirty calendar days following the Project bid closing date and time. The bid expiration date may be extended in unusual circumstances by mutual consent of the Bidder and the Owner. The bid amount shall not be modified due to the bid expiration date extension.

3.3 Any provision contained in a bid which shows cost escalation, or any modification of schedule or other requirements shall not be accepted. Such a provision causes the bid to be invalid, or, at the discretion of the Owner and BGS, that element of the bid submission may be disregarded for the purpose of awarding the contract without that provision.

3.4 Bidders shall include a Bid Bond or other approved bid security with the bid form submitted to the Owner when the bid form indicates such bid security is required. The bond value shall be 5% of the bid amount. The form of bond is shown in section 00 43 13.

3.5 Bidders recognize that inclusion of contract bonds and the cost of those bonds is dependent on the awarded contract dollar value. Therefore, a Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications, resulting in a contract award shall include the cost of Performance and Payment Bonds in the submitted bid amount when the construction contract value is over $125,000.00. Similarly, the cost of Performance and Payment Bonds is excluded in the submitted bid amount when the construction contract value is $125,000.00 or less unless bonds are specifically required by the Bid Documents. When required for the project, the selected Contractor shall provide these bonds before a contract can be executed, pursuant to 14 M.R.S.A., Section 871, Public Works Contractors' Surety Bond Law of 1971, subsection 3. The form of bonds is shown in section 00 61 13.13 and 00 61 13.16.

3.6 Bidders may modify bids in writing, by the same means as the original bid submission, prior to the bid closing time. Such written amendments shall not disclose the amount of the initial bid. If so disclosed, the entire bid is considered invalid.

3.7 Bidders implicitly acknowledge all Addenda issued when they submit the bid form. By usual practice the Consultant shall not issue Addenda less than 72 hours prior to the bid closing time, to allow ample time for bidders to incorporate the information. However, some information, such as extending the bid due date and time, may be issued with shorter notice. Addenda shall be issued to all companies who are registered holders of Bid Documents.

3.8 A bid may be withdrawn without penalty if a written request by the bidder is presented to the Owner prior to the bid closing time. Such written withdrawal requests are subject to verification as required by the Bureau.

A bid may be withdrawn without penalty after the bid closing time if, in the determination of the Bureau, evidence provided by the Contractor shows an apparent unintended error such as a miscalculation, or an erroneous number on estimating documents, was the cause of an inaccurate bid. The Bureau may allow withdrawal in consideration of the bid bond or, without utilizing a bid bond, if the Bureau considers documented evidence provided by the Contractor shows factual errors had been made on the bid form.

3.9 In the event State of Maine Offices unexpectedly close on the published date of a public bid opening in the location of that bid opening, prior to the time of the scheduled deadline, the new deadline for the public bid opening will be the following business day at the originally scheduled hour of the day, at the original location. Official closings are posted on the State of Maine government website.

3.10 The Owner may require, in a Notice of Intent to Award letter to the apparent low bidder, a Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers as both a demonstration of capability of the Bidder and as a condition of award.

3.11 Projects which require a State of Maine wage determination will include that schedule as part of the Bid Documents. See section 00 73 46, if such rates are required.

3.12 Projects which require compliance with the Davis-Bacon Act are subject to the regulations contained the Code for Federal Regulations and the federal wage determination which is made a part of the Bid Documents. See section 00 73 46, if such rates are required.

3.13 The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.

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00 41 13
Contractor Bid Form

DDPC - IF&W Window Replacement BGS Project #3666

Bid Form submitted by: *email only to email address below*

Bid Administrator:
Attn: Linda Greeley BGS.Architect@Maine.gov
Maine Bureau of General Services
77 State House Station
Augusta, ME 04332

Bidder:

Signature: _____

Printed name and title: _____

Company name: _____

Mailing address: _____

City, state, zip code: _____

Phone number: _____

Email address: _____

State of incorporation, if a corporation: _____

List of all partners, if a partnership: _____

The Bidder agrees, if the Owner offers to award the contract, to provide any and all bonds and certificates of insurance, as well as Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers if required by the Owner, and to sign the designated Construction Contract within twelve calendar days after the date of notification of such acceptance, except if the twelfth day falls on a State of Maine government holiday or other closure day, or a Saturday, or a Sunday, in which case the aforementioned documents must be received before 12:00 noon on the first available business day following the holiday, other closure day, Saturday, or Sunday.

As a guarantee thereof, the Bidder submits, together with this bid, a bid bond or other acceptable instrument as and if required by the Bid Documents.

00 41 13
Contractor Bid Form

1. The Bidder, having carefully examined the *DDPC - IF&W Window Replacement* Project Manual dated *March 28, 2024*, prepared by *Harriman*, as well as Specifications, Drawings, and any Addenda, the form of contract, and the premises and conditions relating to the work, proposes to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this project for the **Base Bid** amount of:

   $ _____ .00

2. Allowances *are not included* on this project.
   No Allowances

   $ *0*.00

3. Alternate Bids *are not included* on this project.
   No Alternate Bids
   Any dollar amount line below that is left blank by the Bidder shall be read as a bid of **$0.00**.

   1 Not Used $ _____ .00

   2 Not Used $ _____ .00

   3 Not Used $ _____ .00

   4 Not Used $ _____ .00

4. Bid security *is required* on this project.
   If noted above as required, or if the Base Bid amount exceeds $125,000.00, the Bidder shall include with this bid form a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with this completed bid form submitted to the Owner.

5. Filed Sub-bids *are not required* on this project.
   If noted above as required, the Bidder shall include with this bid form a list of each Filed Sub-bidder selected by the Bidder on the form provided (section 00 41 13F).

00 43 13
Contractor Bid Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of ***five percent of the bid amount***, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, signed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the first specified bid due date, or subsequent bid due date revised by addendum.

The condition of the above obligation is such that whereas the principal has submitted to the Owner, or State of Maine, to a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, for the construction of ***insert name of project as designated in the contract documents***

Now therefore:

If said bid shall be rejected, or, in the alternate,

If said bid shall be accepted and the principal shall execute and deliver a contract in the form of contract attached hereto, properly completed in accordance with said bid, and shall furnish a bond for the faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 43 13
Contractor Bid Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the first specified bid due date, or subsequent bid due date revised by addendum.

Contractor

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

AdvantageME CT# _____

State of Maine
CONSTRUCTION CONTRACT

Large Construction Project

This form is used when the Contract value is $50,000 or greater.
The Project Manual, Specifications and Drawings, and any Addenda are considered part of this Contract.

Agreement entered into by and between the ***insert contracting entity name*** hereinafter called the ***Owner*** and ***insert Contractor company name*** hereinafter called the ***Contractor***.

BGS Project No.: ***insert number assigned by BGS*** Other Project No.: _____

For the following Project: ***title of project shown on documents*** at ***facility or campus name***, ***municipality***, Maine.

The Specifications and the Drawings have been prepared by ***firm name***, acting as Professional-of-Record and named in the documents as the Consultant Architect or Engineer.

The *Owner* and *Contractor* agree as follows:

ARTICLE 1 COMPENSATION AND PAYMENTS

1.1 The Owner shall pay the Contractor to furnish all labor, equipment, materials and incidentals necessary for the construction of the Work described in the Specifications and shown on the Drawings the Contract Amount as shown below.

Base Bid	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Total Contract Amount	***$0.00***

1.2 The Contractor's requisition shall contain sufficient detail and supporting information for the Owner to evaluate and support the payment requested.

1.2.1 Payments are due and payable twenty-five working days from the date of receipt of a Contractor requisition which is approved by the Owner.

1.2.2 Provisions for late payments are governed by 5 M.R.S. Chapter 144, *Payment of Invoices Received from Business Concerns*, and interest shall be calculated at 1% per month.

ARTICLE 2 COMMENCEMENT AND COMPLETION DATES

2.1 The Work of this Contract shall commence no sooner than the date this document is executed by the approval authority, or a subsequent date designated in the contract documents.

2.2 The Substantial Completion Date shall be ***15 December 2023***.

2.3 The Work of this Contract shall be completed on or before the Contract Final Completion Date of ***31 December 2023***.

2.4 The Contract Expiration Date shall be ***29 February 2024***. (This date is the Owner's deadline for internal management of contract accounts. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.)

ARTICLE 3 INELIGIBLE BIDDER

3.1 By signing this contract the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.

3.2 By signing this contract the Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

3.3 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

ARTICLE 4 CONTRACTOR'S RESPONSIBILITIES

4.1 On this project, the Contractor ***shall*** furnish the Owner the appropriate contract bonds in the amount of 100% of the Contract Sum. Contract bonds are mandated if the Contract Sum exceeds $125,000, or if bonds are specifically required by the Contract Documents.

4.2 The Contractor shall comply with all laws, codes and regulations applicable to the Work.

4.3 The Contractor shall acquire all permits and third-party approvals applicable to the Work not specifically identified as provided by the Owner. Costs for Contractor-provided permits and third-party approvals shall be included in the Contract Sum identified in Section 1.1 above.

4.4 The Contractor shall remain an independent agent for the duration of this Contract, shall not become an employee of the State of Maine, and shall assure that no State employee will be compensated by, or otherwise benefit from, this Contract.

4.5 The Contractor shall be responsible for any design cost, construction cost, or other cost incurred on the Project to the extent caused by the negligent acts, errors or omissions of the Contractor or their Subcontractors in the performance of Work under this Contract.

ARTICLE 5 OWNER'S RESPONSIBILITIES

5.1 The Owner shall provide full information about the objectives, schedule, constraints and existing conditions of the project. The Owner has established a budget with reasonable contingencies that meets the project requirements.

5.2 By signing this contract, the Owner attests that all State of Maine procurement requirements for this contract have been met, including the solicitation of competitive bids.

ARTICLE 6 INSTRUMENTS OF SERVICE

6.1 The Contractor's use of the drawings, specifications and other documents known as the Consultant's Instruments of Service is limited to the execution of the Contractor's scope of work of this project unless the Contractor receives the written consent of the Owner and Consultant for use elsewhere.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 This Contract shall be governed by the laws of the State of Maine.

7.2 The Owner and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to this Contract. Neither party to this Contract shall assign the Contract as a whole without written consent of the other party, which consent the Owner may withhold without cause.

7.3 Notwithstanding any other provision of this Agreement, if the Owner does not receive sufficient funds to fund this Agreement or funds are de-appropriated, or if the Owner does not receive legal authority from the Maine State Legislature or Maine Courts to expend funds intended for this Agreement, then the Owner is not obligated to make payment under this Agreement; provided, however, the Owner shall be obligated to pay for services satisfactorily performed prior to any such non-appropriation in accordance with the termination provisions of this Agreement. The Owner shall timely notify the Contractor of any non-appropriation and the effective date of the non-appropriation.

ARTICLE 8 CONTRACT DOCUMENTS

8.1 The Project Manual, Specifications and Drawings, and any Addenda, together with this agreement, form the contract. Each element is as fully a part of the Contract as if hereto attached or herein repeated.

8.2 Specifications: ***indicate date of issuance of project manual***

8.3 Drawings: ***note each sheet number and title***

8.4 Addenda: ***note each addenda number and date, or "none"***

BGS Project No.: _____

The Contract is effective as of the date executed by the approval authority.

OWNER	CONTRACTOR
Signature *Date* *name and title* *name of contracting entity* *address* *telephone* *email address*	*Signature* *Date* *name and title* *name of contractor company* *address* *telephone* *email address* *Vendor Number*

Indicate the names of the review and approval individuals appropriate to the approval authority.

select proper approval authority	
Reviewed by:	Approved by:
Signature *Date* *insert name*	*Signature* *Date* *Joseph H. Ostwald*
Project Manager/ Contract Administrator	*Director, Planning, Design & Construction*

00 61 13.13
Contractor Performance Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of the Contract Price $ ***insert the Contract Price in numbers*** for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly and faithfully perform the contract entered into this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of ***insert name of project as designated in the contract documents***, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.13
Contractor Performance Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.16
Contractor Payment Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of the Contract Price $ ***insert the Contract Price in numbers*** for the use and benefit of claimants, defined as an entity having a contract with the principal or with a subcontractor of the principal for labor, materials, or both labor and materials, used or reasonably required for use in the performance of the contract, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly satisfy all claims and demands incurred for all labor and materials, used or required by the principal in connection with the work described in the contract entered into this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of ***insert name of project as designated in the contract documents***, and shall fully reimburse the obligee for all outlay and expense with said obligee may incur in making good any default of said principal, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.16
Contractor Payment Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 71 00
Definitions

1. Definitions

1.1 *Addendum*: A document issued by the Consultant that amends the Bid Documents. Addenda shall not be issued less than seventy-two hours prior to the specified bid opening time.

1.2 *Allowance*: A specified dollar amount for a particular scope of work or service included in the Work that is identified in the Bid Documents and included in each Bidder's Bid. The Contractor shall document expenditures for an Allowance during the Project. Any unused balance shall be credited to the Owner. The Contractor is responsible for notifying the Owner of anticipated expenses greater than the specified amount and the Owner is responsible for those additional expenses.

1.3 *Alternate Bid*: The Contractor's written offer of a specified dollar amount, submitted on the Bid Form, for the performance of a particular scope of work described in the Bid Documents. The Owner determines the low bidder based on the sum of the base Bid and any combination of Alternate Bids that the Owner selects.

1.4 *Architect*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to "Consultant" in State of Maine contract forms.

1.5 *Architectural Supplemental Instruction (ASI)*: A written instruction from the Architect for the purpose of clarification of the Contract Documents. An ASI does not alter the Contract Price or Contract Time. ASIs may be responses to RFIs and shall be issued by the Architect in a timely manner to avoid any negative impact on the Schedule of the Work.

1.6 *Bid*: The Contractor's written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of the Work. A Bid may include bonds or other requirements. A base Bid is separate and distinct from Alternate Bids, being the only cost component necessary for the award of the contract, and representing the minimum amount of Work that is essential for the functioning of the Project.

1.7 *Bid Bond*: The security designated in the Bid Documents, furnished by Bidders as a guaranty of good faith to enter into a contract with the Owner, should a contract be awarded to that Bidder.

1.8 *Bidder*: Any business entity, individual or corporation that submits a bid for the performance of the work described in the Bid Documents, acting directly or through a duly authorized representative. See also *Responsive and Responsible Bidder*.

1.9 *Bid Documents*: The drawings, procurement and contracting requirements, general requirements, and the written specifications -including all addenda, that a bidder is required to reference in the submission of a bid.

1.10 *Bureau*: The State of Maine Bureau of General Services, or BGS, in the Department of Administrative and Financial Services.

1.11 *Calendar days*: Consecutive days, as occurring on a calendar, taking into account each day of the week, month, year, and any religious, national or local holidays. Calendar days are used for changes in Contract Time.

1.12 *Certificate of Substantial Completion*: A document developed by the Consultant that describes the final status of the Work and establishes the date that the Owner may use the facility for its intended purpose. The Certificate of Substantial Completion may also include a provisional list of items - a "punch list" - remaining to be completed by the Contractor. The Certificate of Substantial Completion identifies the date from which the project warranty period commences.

1.13 *Certificate of Occupancy*: A document developed by a local jurisdiction such as the Code Enforcement Officer that grants permission to the Owner to occupy a building.

1.14 *Change Order (CO)*: A document that modifies the contract and establishes the basis of a specific adjustment to the Contract Price or the Contract Time, or both. Change Orders may address correction of omissions, errors, and document discrepancies, or additional requirements. Change Orders should include all labor, materials and incidentals required to complete the work described. A Change Order is not valid until signed by the Contractor, Owner and Consultant and approved by the Bureau.

1.15 *Change Order Proposal (COP) (see also Proposal)*: Contract change proposed by the Contractor regarding the contract amount, requirements, or time. The Contractor implements the work of a COP after it is accepted by all parties. Accepted COPs are incorporated into the contract by Change Order.

1.16 *Clerk of the Works*: The authorized representative of the Consultant on the job site. Clerk of the Works is sometimes called the Architect's representative.

1.17 *Construction Change Directive (CCD)*: A written order prepared by the Consultant and signed by the Owner and Consultant, directing a change in the Work prior to final agreement with the Contractor on adjustment, if any, in the Contract Price or Contract Time, or both.

1.18 *Contract*: A written agreement between the Owner and the successful bidder which obligates the Contractor to perform the work specified in the Contract Documents and obligates the Owner to compensate the Contractor at the mutually accepted sum, rates or prices.

1.19 *Contract Bonds (also known as Payment and Performance Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.

1.20 *Contract Documents*: The drawings and written specifications (including all addenda), Standard General Conditions, and the contract (including all Change Orders subsequently incorporated in the documents).

1.21 *Contract Expiration Date*: Date determined by the Owner as a deadline for internal management of contract accounts. This allows time after the Contract Final Completion Date for processing the final Requisition for Payment. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.

1.22 *Contract Final Completion Date*: Point of time when the Work is fully completed in compliance with the Contract Documents, as certified by the Consultant. Final payment to the Contractor is due upon Final Completion of the Project.

1.23 *Contract Price*: The dollar amount of the construction contract, also called *Contract Sum*.

1.24 *Contract Time*: The designated duration of time to execute the Work of the contract, with a specific date for completion.

1.25 *Contractor*: Also called the "General Contractor" or "GC" the individual or entity undertaking the execution of the general contract work under the terms of the contract with the Owner, acting directly or through a duly authorized representative. The Contractor is responsible for the means, methods and materials utilized in the execution and completion of the Work.

1.26 *Consultant*: The Architect or Engineer acting as Professional-of-Record for the Project. The Consultant is responsible for the design of the Project.

1.27 *Drawings*: The graphic and pictorial portion of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

1.28 *Engineer*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to “Consultant” in State of Maine contract forms.

1.29 *Filed Sub-bid*: The designated major Subcontractor's (or, in some cases, Contractor’s) written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of a particular portion of the Work. A Filed Sub-bid may include bonds or other requirements.

1.30 *General Requirements*: The on-site overhead expense items the Contractor provides for the Project, typically including, but not limited to, building permits, construction supervision, Contract Bonds, insurance, field office, temporary utilities, rubbish removal, and site fencing. Overhead expenses of the Contractor's general operation are not included. Sometimes referred to as the Contractor's General Conditions.

1.31 *Owner*: The State agency which is represented by duly authorized individuals. The Owner is responsible for defining the scope of the Project and compensation to the Consultant and Contractor.

1.32 *Owner’s Representative*: The individual or entity contracted by the Owner to be an advisor and information conduit regarding the Project.

1.33 *Overhead*: General and administrative expenses of the Contractor’s principal and branch offices, including payroll costs and other compensation of Contractor employees, deductibles paid on any insurance policy, charges against the Contractor for delinquent payments, and costs related to the correction of defective work, and the Contractor’s capital expenses, including interest on capital used for the work.

1.34 *Performance and Payment Bonds (also known as Contract Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.

1.35 *Post-Bid Addendum*: Document issued by the Consultant that defines a potential Change Order prior to signing of the construction contract. The Post-Bid Addendum allows the Owner to negotiate

contract changes with the Bidder submitting the lowest valid bid, only if the negotiated changes to the Bid Documents result in no change or no increase in the bid price.

A Post-Bid Addendum may also be issued after a competitive construction Bid opening to those Bidders who submitted a Bid initially, for the purpose of rebidding the Project work without re-advertising.

1.36 *Project*: The construction project proposed by the Owner to be constructed according to the Contract Documents. The Project, a public improvement, may be tied logistically to other public improvements and other activities conducted by the Owner or other contractors.

1.37 *Proposal (see also Change Order Proposal)*: The Contractor's written offer submitted to the Owner for consideration containing a specified dollar amount or rate, for a specific scope of work, and including a schedule impact, if any. A proposal shall include all costs for overhead and profit. The Contractor implements the work of a Proposal after it is accepted by all parties. Accepted Proposals are incorporated into the contract by Change Order.

1.38 *Proposal Request (PR)*: An Owner's written request to the Contractor for a Change Order Proposal.

1.39 *Punch List*: A document that identifies the items of work remaining to be done by the Contractor at the Close Out of a Project. The Punch List is created as a result of a final inspection of the work only after the Contractor attests that all of the Work is in its complete and permanent status.

1.40 *Request For Information (RFI)*: A Contractor's written request to the Consultant for clarification, definition or description of the Work. RFIs shall be presented by the Contractor in a timely manner to avoid any negative impact on the Schedule of the Work.

1.41 *Request For Proposal (RFP)*: An Owner's written request to the Contractor for a Change Order Proposal.

1.42 *Requisition for Payment*: The document in which the Contractor certifies that the Work described is, to the best of the Contractor's knowledge, information and belief, complete and that all previous payments have been paid by the Contractor to Subcontractors and suppliers, and that the current requested payment is now due. See *Schedule of Values.*

1.43 *Responsive and Responsible Bidder*: A bidder who complies, when submitting a bid on a given project, with the following *responsive* standards, as required by the Bid Documents:
- submits specific qualifications to bid the project, if required;
- attends mandatory pre-bid conferences, if required;
- submits a bid prior to the close of the bid period;
- submits a complete bid form;
- submits a bid without indications of intent contrary to the stated requirements;
- submits other materials and information, such as bid security, as required;

and, meets the following minimums regarding these *responsible* standards:
- sustains a satisfactory record of project performance;
- maintains a permanent place of business in a known physical location;
- possesses the financial means for short- and long-term operations;
- possesses the appropriate technical experience and capabilities;
- employs adequate personnel and subcontractor resources;

maintains the equipment needed to perform the work;
complies with the proposed implementation schedule;
complies with the insurance and bonding requirements;
provides post-construction warranty coverage;
and other criteria which can be considered relevant to the contract.

1.44 *Retainage*: The amount, calculated at five percent (5%) of the contract value or a scheduled value, that the Owner shall withhold from the Contractor until the work or portion of work is declared substantially complete or otherwise accepted by the Owner. The Owner may, if requested, reduce the amount withheld if the Owner deems it desirable and prudent to do so. (See Title 5 M.R.S.A., Section 1746.)

1.45 *Sample*: A physical example provided by the Contractor which illustrates materials, equipment or workmanship and establishes standards by which the Work will be judged.

1.46 *Schedule of the Work*: The document prepared by the Contractor and approved by the Owner that specifies the dates on which the Contractor plans to begin and complete various parts of the Work, including dates on which information and approvals are required from the Owner.

1.47 *Schedule of Values*: The document prepared by the Contractor and approved by the Owner before the commencement of the Work that specifies the dollar values of discrete portions of the Work equal in sum to the contract amount. The Schedule of Values is used to document progress payments of the Work in regular (usually monthly) requisitions for payment. See *Requisition for Payment*.

1.48 *Shop Drawings*: The drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

1.49 *Specifications*: The portion of the Contract Documents consisting of the written requirements of the Work for materials, equipment, systems, standards, workmanship, and performance of related services.

1.50 *Subcontractor*: An individual or entity undertaking the execution of any part of the Work by virtue of a written agreement with the Contractor or any other Subcontractor. Also, an individual or entity retained by the Contractor or any other Subcontractor as an independent contractor to provide the labor, materials, equipment or services necessary to complete a specific portion of the Work.

1.51 *Substantial Completion Date*: Point of time when the Work or a designated portion of the Work is sufficiently complete in compliance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended purpose without unscheduled disruption. Substantial Completion is documented by the date of the Certificate of Substantial Completion signed by the Owner and the Contractor.

1.52 *Superintendent*: The representative of the Contractor on the job site, authorized by the Contractor to receive and fulfill instructions from the Consultant.

1.53 *Surety*: The individual or entity that is legally bound with the Contractor and Subcontractor to insure the faithful performance of the contract and for the payment of the bills for labor, materials and equipment by the Contractor and Subcontractors.

1.54 *Work*: The construction and services, whether completed or partially completed, including all labor, materials, equipment and services provided or to be provided by the Contractor and Subcontractors to fulfill the requirements of the Project as described in the Contract Documents.

00 72 13
General Conditions

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1. Preconstruction Conference

1.1 The Contractor shall, upon acceptance of a contract and prior to commencing work, schedule a preconstruction conference with the Owner and Consultant. The purpose of this conference is as follows.

1.1.1 Introduce all parties who have a significant role in the Project, including:
Owner (State agency or other contracting entity)
Owner's Representative
Consultant (Architect or Engineer)
Subconsultants
Clerk-of-the-works
Contractor (GC)
Superintendent
Subcontractors
Other State agencies
Construction testing company
Commissioning agent
Special Inspections agent
Bureau of General Services (BGS);

1.1.2 Review the responsibilities of each party;

1.1.3 Review any previously-identified special provisions of the Project;

1.1.4 Review the Schedule of the Work calendar submitted by the Contractor to be approved by the Owner and Consultant;

1.1.5 Review the Schedule of Values form submitted by the Contractor to be approved by the Owner and Consultant;

1.1.6 Establish routines for Shop Drawing approval, contract changes, requisitions, et cetera;

1.1.7 discuss jobsite issues;

1.1.8 Discuss Project close-out procedures;

1.1.9 Provide an opportunity for clarification of Contract Documents before work begins; and

1.1.10 Schedule regular meetings at appropriate intervals for the review of the progress of the Work.

2. Intent and Correlation of Contract Documents

2.1 The intent of the Contract Documents is to describe the complete Project. The Contract Documents consist of various components; each component complements the others. What is shown as a requirement by any one component shall be inferred as a requirement on all corresponding components.

2.2 The Contractor shall furnish all labor, equipment and materials, tools, transportation, insurance, services, supplies, operations and methods necessary for, and reasonably incidental to, the construction and completion of the Project. Any work that deviates from the Contract Documents which appears to be required by the exigencies of construction or by inconsistencies in the Contract Documents, will be determined by the Consultant and authorized in writing by the Consultant, Owner and the Bureau prior to execution. The Contractor shall be responsible for requesting clarifying information where the intent of the Contract Documents is uncertain.

2.3 The Contractor shall not utilize any apparent error or omission in the Contract Documents to the disadvantage of the Owner. The Contractor shall promptly notify the Consultant in writing of such errors or omissions. The Consultant shall make any corrections or clarifications necessary in such a situation to document the true intent of the Contract Documents.

3. Additional Drawings and Specifications

3.1 Upon the written request of the Contractor, the Owner shall provide, at no expense to the Contractor, up to five sets of printed Drawings and Specifications for the execution of the Work.

3.2 The Consultant shall promptly furnish to the Contractor revised Drawings and Specifications, for the area of the documents where those revisions apply, when corrections or clarifications are made by the Consultant. All such information shall be consistent with, and reasonably inferred from, the Contract Documents. The Contractor shall do no work without the proper Drawings and Specifications.

4. Ownership of Contract Documents

4.1 The designs represented on the Contract Documents are the property of the Consultant. The Drawings and Specifications shall not be used on other work without consent of the Consultant.

5. Permits, Laws, and Regulations

5.1 The Owner is responsible for obtaining any zoning approvals or other similar local project approvals necessary to complete the Work, unless otherwise specified in the Contract Documents.

5.2 The Owner is responsible for obtaining Maine Department of Environmental Protection, Maine Department of Transportation, or other similar state government project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.

5.3 The Owner is responsible for obtaining any federal agency project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.

5.4 The Owner is responsible for obtaining all easements for permanent structures or permanent changes in existing facilities.

5.5 The Contractor is responsible for obtaining and paying for all permits and licenses necessary for the implementation of the Work. The Contractor shall notify the Owner of any delays, variance or restrictions that may result from the issuing of permits and licenses.

5.6 The Contractor shall comply with all ordinances, laws, rules and regulations and make all required notices bearing on the implementation of the Work. In the event the Contractor observes disagreement between the Drawings and Specifications and any ordinances, laws, rules and regulations, the Contractor shall promptly notify the Consultant in writing. Any necessary changes shall be made as provided in the contract for changes in the work. The Contractor shall not perform any work knowing it to be contrary to such ordinances, laws, rules and regulations.

5.7 The Contractor shall comply with local, state and federal regulations regarding construction safety and all other aspects of the Work.

5.8 The Contractor shall comply with the Maine Code of Fair Practices and Affirmative Action, 5 M.R.S. §784 (2).

6. Taxes

6.1 The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.

6.2 Section 1760 further provides in subsection 61 that sales to a construction contractor or its subcontractor of tangible personal property that is to be physically incorporated in, and become a permanent part of, real property for sale to or owned by the Owner, are exempt from Maine State sales and use taxes. Tangible personal property is defined in 36 M.R.S. §1752 (17).

6.3 The Contractor may contact Maine Revenue Services, 24 State House Station, Augusta, Maine 04333 for guidance on tax exempt regulations authorized by 36 M.R.S. §1760 and detailed in Rule 302 (18-125 CMR 302).

7. Labor and Wages

7.1 The Contractor shall conform to the labor laws of the State of Maine, and all other laws, ordinances, and legal requirements affecting the work in Maine.

7.2 The Consultant shall include a wage determination document prepared by the Maine Department of Labor in the Contract Documents for state-funded contracts in excess of $50,000. The document shows the minimum wages required to be paid to each category of labor employed on the project.

7.3 On projects requiring a Maine wage determination, the Contractor shall submit monthly payroll records to the Owner ("the contracting agency") showing the name and occupation of all workers and all independent contractors employed on the project. The monthly submission must also include the Contractor's company name, the title of the project, hours worked, hourly rate or other method of remuneration, and the actual wages or other compensation paid to each person.

7.4 The Contractor shall not reveal, in the payroll records submitted to the Owner, personal information regarding workers and independent contractors, other than the information described above. Such information shall not include Social Security number, employee identification number, or employee address or phone number, for example.

7.5 The Contractor shall conform to Maine statute (39-A M.R.S. §105-A (6)) by providing to the Workers' Compensation Board a list of all subcontractors and independent contractors on the job site and a record of the entity to whom that subcontractor or independent contractor is directly contracted and by whom that subcontractor or independent contractor is insured for workers' compensation purposes.

7.6 The Contractor shall enforce strict discipline and good order among their employees at all times, and shall not employ any person unfit or unskilled to do the work assigned to them.

7.7 The Contractor shall promptly pay all employees when their compensation is due, shall promptly pay all others who have billed and are due for materials, supplies and services used in the Work, and shall promptly pay all others who have billed and are due for insurance, workers compensation coverage, federal and state unemployment compensation, and Social Security

charges pertaining to this Project. Before final payments are made, the Contractor shall furnish to the Owner affidavits that all such payments described above have been made.

7.8 The Contractor may contact the Maine Department of Labor, 54 State House Station, Augusta, Maine 04333 for guidance on labor issues.

7.9 The Contractor may contact the Maine Workers' Compensation Board, 27 State House Station, Augusta, Maine 04333 for guidance on workers' compensation issues.

8. Indemnification

8.1 The Contractor shall indemnify and hold harmless the Owner and its officers and employees from and against any and all damages, liabilities, and costs, including reasonable attorney's fees, and defense costs, for any and all injuries to persons or property, including claims for violation of intellectual property rights, to the extent caused by the negligent acts or omissions of the Contractor, its employees, agents, officers or subcontractors in the performance of work under this Agreement. The Contractor shall not be liable for claims to the extent caused by the negligent acts or omissions of the Owner or for actions taken in reasonable reliance on written instructions of the Owner.

8.2 The Contractor shall notify the Owner promptly of all claims arising out of the performance of work under this Agreement by the Contractor, its employees or agents, officers or subcontractors.

8.3 This indemnity provision shall survive the termination of the Agreement, completion of the project or the expiration of the term of the Agreement.

9. Insurance Requirements

9.1 The Contractor shall provide, with each original of the signed Contract, an insurance certificate or certificates acceptable to the Owner and BGS. The Contractor shall submit insurance certificates to the Owner and BGS at the commencement of this Contract and at policy renewal or revision dates. The certificates shall identify the project name and BGS project number, and shall name the Owner as certificate holder and as additional insured for general liability and automobile liability coverages. The submitted forms shall contain a provision that coverage afforded under the insurance policies will not be canceled or materially changed unless at least ten days prior written notice by registered letter has been given to the Owner and BGS.

9.2 The Owner does not warrant or represent that the insurance required herein constitutes an insurance portfolio which adequately addresses all risks faced by the Contractor or its Subcontractors. The Contractor is responsible for the existence, extent and adequacy of insurance prior to commencement of work. The Contractor shall not allow any Subcontractor to commence work until all similar insurance required of the Subcontractor has been confirmed by the Contractor.

9.3 The Contractor shall procure and maintain primary insurance for the duration of the Project and, if written on a Claims-Made basis, shall also procure and maintain Extended Reporting Period (ERP) insurance for the period of time that any claims could be brought. The Contractor shall ensure that all Subcontractors they engage or employ will procure and maintain similar insurance

in form and amount acceptable to the Owner and BGS. At a minimum, the insurance shall be of the types and limits set forth herein protecting the Contractor from claims which may result from the Contractor's execution of the Work, whether such execution be by the Contractor or by those employed by the Contractor or by those for whose acts they may be liable. All required insurance coverages shall be placed with carriers authorized to conduct business in the State of Maine by the Maine Bureau of Insurance.

9.3.1 The Contractor shall have Workers' Compensation insurance for all employees on the Project site in accordance with the requirements of the Workers' Compensation law of the State of Maine. Minimum acceptable limits for Employer's Liability are:

Bodily Injury by Accident.....$500,000
Bodily Injury by Disease.....$500,000 Each Employee
Bodily Injury by Disease.....$500,000 Policy Limit

9.3.2 The Contractor shall have Commercial General Liability insurance providing coverage for bodily injury and property damage liability for all hazards of the Project including premise and operations, products and completed operations, contractual, and personal injury liabilities. The policy shall include collapse and underground coverage as well as explosion coverage if explosion hazards exist. Aggregate limits shall apply on a location or project basis. Minimum acceptable limits are:

General aggregate limit.....$2,000,000
Products and completed operations aggregate $1,000,000
Each occurrence limit.....$1,000,000
Personal injury aggregate.....$1,000,000

9.3.3 The Contractor shall have Automobile Liability insurance against claims for bodily injury, death or property damage resulting from the maintenance, ownership or use of all owned, non-owned and hired automobiles, trucks and trailers. Minimum acceptable limit is:

Any one accident or loss $500,000

9.3.4 For the portion of a project which is new construction, the Contractor shall procure and maintain Builder's Risk insurance naming the Owner, Contractor, and any Subcontractor as insureds as their interest may appear. Covered causes of loss form shall be all Risks of Direct Physical Loss, endorsed to include flood, earthquake, transit and sprinkler leakage where sprinkler coverage is applicable. Unless specifically authorized in writing by the Owner, the limit of insurance shall not be less than the initial contract amount, for the portion of the project which is new construction, and coverage shall apply during the entire contract period and until the work is accepted by the Owner.

9.3.5 The Contractor shall have Owner's Protective Liability insurance for contract values $50,000 and above, naming the Owner as the Named Insured. Minimum acceptable limits are:

General aggregate limit.....$2,000,000
Each occurrence limit.....$1,000,000

10. Contract Bonds

10.1 When noted as required in the Bid Documents, the Contractor shall provide to the Owner a Performance Bond and a Payment Bond, or "contract bonds", upon execution of the contract. Each bond value shall be for the full amount of the contract and issued by a surety company authorized to do business in the State of Maine as approved by the Owner. The bonds shall be

executed on the forms furnished in the Bid Documents. The bonds shall allow for any subsequent additions or deductions of the contract.

10.2 The contract bonds shall continue in effect for one year after final acceptance of the contract to protect the Owner's interest in connection with the one year guarantee of workmanship and materials and to assure settlement of claims for the payment of all bills for labor, materials and equipment by the Contractor.

11. Patents and Royalties

11.1 The Contractor shall, for all time, secure for the Owner the free and undisputed right to the use of any patented articles or methods used in the Work. The expense of defending any suits for infringement or alleged infringement of such patents shall be borne by the Contractor. Awards made regarding patent suits shall be paid by the Contractor. The Contractor shall hold the Owner harmless regarding patent suits that may arise due to installations made by the Contractor, and to any awards made as a result of such suits.

11.2 Any royalty payments related to the work done by the Contractor for the Project shall be borne by the Contractor. The Contractor shall hold the Owner harmless regarding any royalty payments that may arise due to installations made by the Contractor.

12. Surveys, Layout of Work

12.1 The Owner shall furnish all property surveys unless otherwise specified.

12.2 The Contractor is responsible for correctly staking out the Work on the site. The Contractor shall employ a competent surveyor to position all construction on the site. The surveyor shall run the axis lines, establish correct datum points and check each line and point on the site to insure their accuracy. All such lines and points shall be carefully preserved throughout the construction.

12.3 The Contractor shall lay out all work from dimensions given on the Drawings. The Contractor shall take measurements and verify dimensions of any existing work that affects the Work or to which the Work is to be fitted. The Contractor is solely responsible for the accuracy of all measurements. The Contractor shall verify all grades, lines, levels, elevations and dimensions shown on the Drawings and report any errors or inconsistencies to the Consultant prior to commencing work.

13. Record of Documents

13.1 The Contractor shall maintain one complete set of Contract Documents on the jobsite, in good order and current status, for access by the Owner and Consultant.

13.2 The Contractor shall maintain, continuously updated, complete records of Requests for Information, Architectural Supplemental Instructions (or equivalent), Information Bulletins, supplemental sketches, Change Order Proposals, Change Orders, Shop Drawings, testing reports, et cetera, for access by the Owner and Consultant.

14. Allowances

14.1 The Contract Price shall include all allowances described in the Contract Documents. The Contractor shall include all overhead and profit necessary to implement each allowance in their Contract Price.

14.2 The Contractor shall not be required to employ parties for allowance work against whom the Contractor has a reasonable objection. In such a case, the Contractor shall notify the Owner in writing of their position and shall propose an alternative party to complete the work of the allowance.

15. Shop Drawings

15.1 The Contractor shall administer Shop Drawings prepared by the Contractor, Subcontractors, suppliers or others to conform to the approved Schedule of the Work. The Contractor shall verify all field measurements, check and authorize all Shop Drawings and schedules required by the Work. The Contractor is the responsible party and contact for the Contractor's work as well as that of Subcontractors, suppliers or others who provide Shop Drawings.

15.2 The Consultant shall review and acknowledge Shop Drawings, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents.

15.3 The Contractor shall provide monthly updated logs containing: requests for information, information bulletins, supplemental instructions, supplemental sketches, change order proposals, change orders, submittals, testing and deficiencies.

15.4 The Contractor shall make any corrections required by the Consultant, and shall submit a quantity of corrected copies as may be needed. The acceptance of Shop Drawings or schedules by the Consultant shall not relieve the Contractor from responsibility for deviations from Drawings and Specifications, unless the Contractor has called such deviations to the attention of the Consultant at the time of submission and secured the Consultant’s written approval. The acceptance of Shop Drawings or schedules by the Consultant does not relieve the Contractor from responsibility for errors in Shop Drawings or schedules.

16. Samples

16.1 The Contractor shall furnish for approval, with reasonable promptness, all samples as directed by the Consultant. The Consultant shall review and approve such samples, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents. The subsequent work shall be in accord with the approved samples.

17. Substitutions

17.1 The Contractor shall furnish items and materials described in the Contract Documents. If the item or material specified describes a proprietary product, or uses the name of a manufacturer, the term “or approved equal” shall be implied, if it is not included in the text. The specific item or material specified establishes a minimum standard for the general design, level of quality, type, function, durability, efficiency, reliability, compatibility, warranty coverage, installation factors

and required maintenance. The Drawing or written Specification shall not be construed to exclude other manufacturers products of comparable design, quality, and efficiency.

17.2 The Contractor may submit detailed information about a proposed substitution to the Consultant for consideration. Particular models of items and particular materials which the Contractor asserts to be equal to the items and materials identified in the Contract Documents shall be allowed only with written approval by the Consultant. The request for substitution shall include a cost comparison and a reason or reasons for the substitution.

17.3 The Consultant may request additional information about the proposed substitution. The approval or rejection of a proposed substitution may be based on timeliness of the request, source of the information, the considerations of minimum standards described above, or other considerations. The Consultant should briefly state the rationale for the decision. The decision shall be considered final.

17.4 The duration of a substitution review process can not be the basis for a claim for delay in the Schedule of the Work.

18. Assignment of Contract

18.1 The Contractor shall not assign or sublet the contract as a whole without the written consent of the Owner. The Contractor shall not assign any money due to the Contractor without the written consent of the Owner.

19. Separate Contracts

19.1 The Owner reserves the right to create other contracts in connection with this Project using similar General Conditions. The Contractor shall allow the Owner's other contractors reasonable opportunity for the delivery and storage of materials and the execution of their work. The Contractor shall coordinate and properly connect the Work of all contractors.

19.2 The Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in work of the Owner's other contractors that impacts the proper execution or results of the Contractor. The Contractor’s failure to observe or report any deficiencies constitutes an acceptance of the Owner's other contractors work as suitable for the interface of the Contractor’s work, except for latent deficiencies in the Owner's other contractors work.

19.3 Similarly, the Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in their own work that would impact the proper execution or results of the Owner's other contractors.

19.4 The Contractor shall report to the Consultant and Owner any conflicts or claims for damages with the Owner's other contractors and settle such conflicts or claims for damages by mutual agreement or arbitration, if necessary, at no expense to the Owner.

19.5 In the event the Owner's other contractors sue the Owner regarding any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense. The Contractor shall pay or satisfy any judgment that may arise against the Owner, and pay all other costs incurred.

20. Subcontracts

20.1 The Contractor shall not subcontract any part of this contract without the written permission of the Owner.

20.2 The Contractor shall submit a complete list of named Subcontractors and material suppliers to the Consultant and Owner for approval by the Owner prior to commencing work. The Subcontractors named shall be reputable companies of recognized standing with a record of satisfactory work.

20.3 The Contractor shall not employ any Subcontractor or use any material until they have been approved, or where there is reason to believe the resulting work will not comply with the Contract Documents.

20.4 The Contractor, not the Owner, is as fully responsible for the acts and omissions of Subcontractors and of persons employed by them, as the Contractor is for the acts and omissions of persons directly or indirectly employed by the Contractor.

20.5 Neither the Contract Documents nor any Contractor-Subcontractor contract shall indicate, infer or create any direct contractual relationship between any Subcontractor and the Owner.

21. Contractor-Subcontractor Relationship

21.1 The Contractor shall be bound to the Subcontractor by all the obligations in the Contract Documents that bind the Contractor to the Owner.

21.2 The Contractor shall pay the Subcontractor, in proportion to the dollar value of the work completed and requisitioned by the Subcontractor, the approved dollar amount allowed to the Contractor no more than seven days after receipt of payment from the Owner.

21.3 The Contractor shall pay the Subcontractor accordingly if the Contract Documents or the subcontract provide for earlier or larger payments than described in the provision above.

21.4 The Contractor shall pay the Subcontractor for completed and requisitioned subcontract work, less retainage, no more than seven days after receipt of payment from the Owner for the Contractor's approved Requisition for Payment, even if the Consultant fails to certify a portion of the Requisition for Payment for a cause not the fault of the Subcontractor.

21.5 The Contractor shall not make a claim for liquidated damages or penalty for delay in any amount in excess of amounts that are specified by the subcontract.

21.6 The Contractor shall not make a claim for services rendered or materials furnished by the Subcontractor unless written notice is given by the Contractor to the Subcontractor within ten calendar days of the day in which the claim originated.

21.7 The Contractor shall give the Subcontractor an opportunity to present and to submit evidence in any progress conference or disputes involving subcontract work.

21.8 The Contractor shall pay the Subcontractor a just share of any fire insurance payment received by the Contractor.

21.9 The Subcontractor shall be bound to the Contractor by the terms of the Contract Documents and assumes toward the Contractor all the obligations and responsibilities that the Contractor, by those documents, assumes toward the Owner.

21.10 The Subcontractor shall submit applications for payment to the Contractor in such reasonable time as to enable the Contractor to apply for payment as specified.

21.11 The Subcontractor shall make any claims for extra cost, extensions of time or damages, to the Contractor in the manner provided in these General Conditions for like claims by the Contractor to the Owner, except that the time for the Subcontractor to make claims for extra cost is seven calendar days after the receipt of Consultant's instructions.

22. Supervision of the Work

22.1 During all stages of the Work the Contractor shall have a competent superintendent, with any necessary assistant superintendents, overseeing the project. The superintendent shall not be reassigned without the consent of the Owner unless a superintendent ceases to be employed by the Contractor due to unsatisfactory performance.

22.2 The superintendent represents the Contractor on the jobsite. Directives given by the Consultant or Owner to the superintendent shall be as binding as if given directly to the Contractor's main office. All important directives shall be confirmed in writing to the Contractor. The Consultant and Owner are not responsible for the acts or omissions of the superintendent or assistant superintendents.

22.3 The Contractor shall provide supervision of the Work equal to the industry's highest standard of care. The superintendent shall carefully study and compare all Contract Documents and promptly report any error, inconsistency or omission discovered to the Consultant. The Contractor may not necessarily be held liable for damages resulting directly from any error, inconsistency or omission in the Contract Documents or other instructions by the Consultant that was not revealed by the superintendent in a timely way.

23. Observation of the Work

23.1 The Contractor shall allow the Owner, the Consultant and the Bureau continuous access to the site for the purpose of observation of the progress of the work. All necessary safeguards and accommodations for such observations shall be provided by the Contractor.

23.2 The Contractor shall coordinate all required testing, approval or demonstration of the Work. The Contractor shall give sufficient notice to the appropriate parties of readiness for testing, inspection or examination.

23.3 The Contractor shall schedule inspections and obtain all required certificates of inspection for inspections by a party other than the Consultant.

23.4 The Consultant shall make all scheduled observations promptly, prior to the work being concealed or buried by the Contractor. If approval of the Work is required of the Consultant, the Contractor shall notify the Consultant of the construction schedule in this regard. Work concealed or buried prior to the Consultant's approval may need to be uncovered at the Contractor's expense.

23.5 The Consultant may order reexamination of questioned work, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to conform to the Contract Documents, the Owner shall pay the expense of the reexamination and remedial work. If the work is found to not conform to the Contract Documents, the Contractor shall pay the expense, unless the defect in the work was caused by the Owner's Contractor, whose responsibility the reexamination expense becomes.

23.6 The Bureau shall periodically observe the Work during the course of construction and make recommendations to the Contractor or Consultant as necessary. Such recommendations shall be considered and implemented through the usual means for changes to the Work.

24. Consultant's Status

24.1 The Consultant represents the Owner during the construction period, and observes the work in progress on behalf of the Owner. The Consultant has authority to act on behalf of the Owner only to the extent expressly provided by the Contract Documents or otherwise demonstrated to the Contractor. The Consultant has authority to stop the work whenever such an action is necessary, in the Consultant's reasonable opinion, to ensure the proper execution of the contract.

24.2 The Consultant is the interpreter of the conditions of the contract and the judge of its performance. The Consultant shall favor neither the Owner nor the Contractor, but shall use the Consultant's powers under the contract to enforce faithful performance by both parties.

24.3 In the event of the termination of the Consultant's employment on the project prior to completion of the work, the Owner shall appoint a capable and reputable replacement. The status of the new Consultant relative to this contract shall be that of the former Consultant.

25. Management of the Premises

25.1 The Contractor shall place equipment and materials, and conduct activities on the premises in a manner that does not unreasonably hinder site circulation, environmental stability, or any long term effect. Likewise, the Consultant's directions shall not cause the use of premises to be impeded for the Contractor or Owner.

25.2 The Contractor shall not use the premises for any purpose other than that which is directly related to the scope of work. The Owner shall not use the premises for any purpose incompatible with the proposed work simultaneous to the work of the Contractor.

25.3 The Contractor shall enforce the Consultant's instructions regarding information posted on the premises such as signage and advertisements, as well as activities conducted on the premises such as fires, and smoking.

25.4 The Owner may occupy any part of the Project that is completed with the written consent of the Contractor, and without prejudice to any of the rights of the Owner or Contractor. Such use or occupancy shall not, in and of itself, be construed as a final acceptance of any work or materials.

26. Safety and Security of the Premises

26.1 The Contractor shall designate, and make known to the Consultant and the Owner, a safety officer whose duty is the prevention of accidents on the site.

26.2 The Contractor shall continuously maintain security on the premises and protect from unreasonable occasion of injury all people authorized to be on the job site. The Contractor shall also effectively protect the property and adjacent properties from damage or loss.

26.3 The Contractor shall take all necessary precautions to ensure the safety of workers and others on and adjacent to the site, abiding by applicable local, state and federal safety regulations. The Contractor shall erect and continuously maintain safeguards for the protection of workers and others, and shall post signs and other warnings regarding hazards associated with the construction process, such as protruding fasteners, moving equipment, trenches and holes, scaffolding, window, door or stair openings, and falling materials.

26.4 The Contractor shall restore the premises to conditions that existed prior to the start of the project at areas not intended to be altered according to the Contract Documents.

26.5 The Contractor shall protect existing utilities and exercise care working in the vicinity of utilities shown in the Drawings and Specifications or otherwise located by the Contractor.

26.6 The Contractor shall protect from damage existing trees and other significant plantings and landscape features of the site which will remain a permanent part of the site. If necessary or indicated in the Contract Documents, tree trunks shall be boxed and barriers erected to prevent damage to tree branches or roots.

26.7 The Contractor shall repair or replace damage to the Work caused by the Contractor's or Subcontractor's forces, including that which is reasonably protected, at the expense of the responsible party.

26.8 The Contractor shall not load, or allow to be loaded, any part of the Project with a force which imperils personal or structural safety. The Consultant may consult with the Contractor on such means and methods of construction, however, the ultimate responsibility lies with the Contractor.

26.9 The Contractor shall not jeopardize any work in place with subsequent construction activities such as blasting, drilling, excavating, cutting, patching or altering work. The Consultant must approve altering any structural components of the project. The Contractor shall supervise all construction activities carried out by others on site to ensure that the work is neatly done and in a manner that will not endanger the structure or the component parts.

26.10 The Contractor may act with their sole discretion in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Contractor may negotiate with the Owner for compensation for expenses due to such emergency work.

26.11 The Contractor and Subcontractors shall have no responsibility for the identification, discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials in any form at the project site. The Contractor shall avoid disruption of any hazardous materials or toxic substances at the project site and promptly notify the Owner in writing on the occasion of such a discovery.

26.12 The Contractor shall keep the premises free of any unsafe accumulation of waste materials caused by the work. The Contractor shall regularly keep the spaces "broom clean". See the Close-out of the Work provisions of this section regarding cleaning at the completion of the project.

27. Changes in the Work

27.1 The Contractor shall not proceed with extra work without an approved Change Order or Construction Change Directive. A Change Order which has been properly signed by all parties shall become a part of the contract.

27.2 A Change Order is the usual document for directing changes in the Work. In certain circumstances, however, the Owner may utilize a Construction Change Directive to direct the Contractor to perform changes in the Work that are generally consistent with the scope of the project. The Owner shall use a Construction Change Directive only when the normal process for approving changes to the Work has failed to the detriment of the Project, or when agreement on the terms of a Change Order cannot be met, or when an urgent situation requires, in the Owner's judgment, prompt action by the Contractor.

27.3 The Consultant shall prepare the Construction Change Directive representing a complete scope of work, with proposed Contract Price and Contract Time revisions, if any, clearly stated.

27.4 The Contractor shall promptly carry out a Construction Change Directive which has been signed by the Owner and the Consultant. Work thus completed by the Contractor constitutes the basis for a Change Order. Changes in the Contract Price and Contract Time shall be as defined in the Construction Change Directive unless subsequently negotiated with some other terms.

27.5 The method of determining the dollar value of extra work shall be by:
- .1 an estimate of the Contractor accepted by Owner as a lump sum, or
- .2 unit prices named in the contract or subsequently agreed upon, or
- .3 cost plus a designated percentage, or
- .4 cost plus a fixed fee.

27.6 The Contractor shall determine the dollar value of the extra work for both the lump sum and cost plus designated percentage methods so as not to exceed the following rates. The rates include all overhead and profit expenses.
- .1 Contractor - for any work performed by the Contractor's own forces, up to 20% of the cost;
- .2 Subcontractor - for work performed by Subcontractor's own forces, up to 20% of the cost;
- .3 Contractor - for work performed by Contractor's Subcontractor, up to 10% of the amount due the Subcontractor.

27.7 The Contractor shall keep and provide records as needed or directed for the cost plus designated percentage method. The Consultant shall review and certify the appropriate amount which

includes the Contractor's overhead and profit. The Owner shall make payments based on the Consultant's certificate.

27.8 Cost reflected in Change Orders shall be limited to the following: cost of materials, cost of delivery, cost of labor (including Social Security, pension, Workers' Compensation insurance, and unemployment insurance), and cost of rental of power tools and equipment. Labor cost may include a pro-ratio share of a foreman's time only in the case of an extension of contract time granted due to the Change Order.

27.9 Overhead reflected in Change Orders shall be limited to the following: bond premium, supervision, wages of clerks, time keepers, and watchmen, small tools, incidental expenses, general office expenses, and all other overhead expenses directly related to the Change Order.

27.10 The Contractor shall provide credit to the Owner for labor, materials, equipment and other costs but not overhead and profit expenses for those Change Order items that result in a net value of credit to the contract.

27.11 The Owner may change the scope of work of the Project without invalidating the contract. The Owner shall notify the Contractor of a change of the scope of work for the Owner's Contractors, which may affect the work of this Contractor, without invalidating the contract. Change Orders for extension of the time caused by such changes shall be developed at the time of directing the change in scope of work.

27.12 The Consultant may order minor changes in the Work, not involving extra cost, which is consistent with the intent of the design or project.

27.13 The Contractor shall immediately give written notification to the Consultant of latent conditions discovered at the site which materially differ from those represented in the Drawings or Specifications, and which may eventually result in a change in the scope of work. The Contractor shall suspend work until receiving direction from the Consultant. The Consultant shall promptly investigate the conditions and respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the discovered conditions warrant a Change Order.

27.14 The Contractor shall, within ten calendar days of receipt of the information, give written notification to the Consultant if the Contractor claims that instructions by the Consultant will constitute extra cost not accounted for by Change Order or otherwise under the contract. The Consultant shall promptly respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the Contractor's claim warrants a Change Order.

28. Correction of the Work

28.1 The Contractor shall promptly remove from the premises all work the Consultant declares is non-conforming to the contract. The Contractor shall replace the work properly at no expense to the Owner. The Contractor is also responsible for the expenses of others whose work was damaged or destroyed by such remedial work.

28.2 The Owner may elect to remove non-conforming work if it is not removed by the Contractor within a reasonable time, that time defined in a written notice from the Consultant. The Owner may elect to store removed non-conforming work not removed by the Contractor at the Contractor's expense. The Owner may, with ten days written notice, dispose of materials which the Contractor does not remove. The Owner may sell the materials and apply the net proceeds, after deducting all expenses, to the costs that should have been borne by the Contractor.

28.3 The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any related damage to other work which appears within a period of one year from the date of substantial completion, and in accord with the terms of any guarantees provided in the contract. The Owner shall promptly give notice of observed defects to the Contractor and Consultant. The Consultant shall determine the status of all claimed defects. The Contractor shall perform all remedial work without unjustifiable delay in either the initial response or the corrective action.

28.4 The Consultant may authorize, after a reasonable notification to the Contractor, an equitable deduction from the contract amount in lieu of the Contractor correcting non-conforming or defective work.

29. Owner's Right to do Work

29.1 The Owner may, using other contractors, correct deficiencies attributable to the Contractor, or complete unfinished work. Such action shall take place only after giving the Contractor three days written notice, and provided the Consultant approves of the proposed course of action as an appropriate remedy. The Owner may then deduct the cost of the remedial work from the amount due the Contractor.

29.2 The Owner may act with their sole discretion when the Contractor is unable to take action in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Owner shall inform the Contractor of the emergency work performed, particularly where it may affect the work of the Contractor.

30. Termination of Contract and Stop Work Action

30.1 The Owner may, owing to a certificate of the Consultant indicating that sufficient cause exists to justify such action, without prejudice to any other right or remedy and after giving the Contractor and the Contractor’s surety seven days written notice, terminate the employment of the Contractor. At that time the Owner may take possession of the premises and of all materials,

tools and appliances on the premises and finish the work by whatever method the Owner may deem expedient. Cause for such action by the Owner includes:

.1 the contractor is adjudged bankrupt, or makes a general assignment for the benefit of its creditors, or

.2 a receiver is appointed due to the Contractor's insolvency, or

.3 the Contractor persistently or repeatedly refuses or fails to provide enough properly skilled workers or proper materials, or

.4 the Contractor fails to make prompt payment to Subcontractors or suppliers of materials or labor, or

.5 the Contractor persistently disregards laws, ordinances or the instructions of the Consultant, or is otherwise found guilty of a substantial violation of a provision of the Contract Documents.

30.2 The Contractor is not entitled, as a consequence of the termination of the employment of the Contractor as described above, to receive any further payment until the Work is finished. If the unpaid balance of the contract amount exceeds the expense of finishing the Work, including compensation for additional architectural, managerial and administrative services, such balance shall be paid to the Contractor. If the expense of finishing the Work exceeds the unpaid balance, the Contractor shall pay the difference to the Owner. The Consultant shall certify the expense incurred by the Contractor's default. This obligation for payment shall continue to exist after termination of the contract.

30.3 The Contractor may, if the Work is stopped by order of any court or other public authority for a period of thirty consecutive days, and through no act or fault of the Contractor or of anyone employed by the Contractor, with seven days written notice to the Owner and the Consultant, terminate this contract. The Contractor may then recover from the Owner payment for all work executed, any proven loss and reasonable profit and damage.

30.4 The Contractor may, if the Consultant fails to issue a certificate for payment within seven days after the Contractor's formal request for payment, through no fault of the Contractor, or if the Owner fails to pay to the Contractor within 30 days after submission of any sum certified by the Consultant, with seven days written notice to the Owner and the Consultant, stop the Work or terminate this Contract.

31. Delays and Extension of Time

31.1 The completion date of the contract shall be extended if the work is delayed by changes ordered in the work which have approved time extensions, or by an act or neglect of the Owner, the Consultant, or the Owner's Contractor, or by strikes, lockouts, fire, flooding, unusual delay in transportation, unavoidable casualties, or by other causes beyond the Contractor's control. The Consultant shall determine the status of all claimed causes.

31.2 The contract shall not be extended for delay occurring more than seven calendar days before the Contractor's claim made in writing to the Consultant. In case of a continuing cause of delay, only one claim is necessary.

31.3 The contract shall not be extended due to failure of the Consultant to furnish drawings if no schedule or agreement is made between the Contractor and the Consultant indicating the dates

which drawings shall be furnished and fourteen calendar days has passed after said date for such drawings.

31.4 This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Document.

32. Payments to the Contractor

32.1 As noted under *Preconstruction Conference* in this section, the Contractor shall submit a Schedule of Values form, before the first application for payment, for approval by the Owner and Consultant. The Consultant may direct the Contractor to provide evidence that supports the correctness of the form. The approved Schedule of Values shall be used as a basis for payments.

32.2 The Contractor shall submit an application for each payment ("Requisition for Payment") on a form approved by the Owner and Consultant. The Consultant may require receipts or other documents showing the Contractor's payments for materials and labor, including payments to Subcontractors.

32.3 The Contractor shall submit Requisitions for Payment as the work progresses not more frequently than once each month, unless the Owner approves a more frequent interval due to unusual circumstances. The Requisition for Payment is based on the proportionate quantities of the various classes of work completed or incorporated in the Work, in agreement with the actual progress of the Work and the dollar value indicated in the Schedule of Values.

32.4 The Consultant shall verify and certify each Requisition for Payment which appears to be complete and correct prior to payment being made by the Owner. The Consultant may certify an appropriate amount for materials not incorporated in the Work which have been delivered and suitably stored at the site. The Contractor shall submit bills of sale, insurance certificates, or other such documents that will adequately protect the Owner's interests prior to payments being certified.

32.5 In the event any materials delivered but not yet incorporated in the Work have been included in a certified Requisition for Payment with payment made, and said materials thereafter are damaged, deteriorated or destroyed, or for any reason whatsoever become unsuitable or unavailable for use in the Work, the full amount previously allowed shall be deducted from subsequent payments unless the Contractor satisfactorily replaces said material.

32.6 The Contractor may request certification of an appropriate dollar amount for materials not incorporated in the Work which have been delivered and suitably stored away from the site. The Contractor shall submit bills of sale, insurance certificates, right-of-entry documents or other such documents that will adequately protect the Owner's interests. The Consultant shall determine if the Contractor's documentation for the materials is complete and specifically designated for the Project. The Owner may allow certification of such payments.

32.7 Subcontractors may request, and shall receive from the Consultant, copies of approved Requisitions for Payment showing the amounts certified in the Schedule of Values.

32.8 Certified Requisitions for Payment, payments made to the Contractor, or partial or entire occupancy of the project by the Owner shall not constitute an acceptance of any work that does

not conform to the Contract Documents. The making and acceptance of the final payment constitutes a waiver of all claims by the Owner, other than those arising from unsettled liens, from faulty work or materials appearing within one year from final payment or from requirements of the Drawings and Specifications, and of all claims by the Contractor, except those previously made and still unsettled.

33. Payments Withheld

33.1 The Owner shall retain five percent of each payment due the Contractor as part security for the fulfillment of the contract by the Contractor. The Owner may make payment of a portion of this "retainage" to the Contractor temporarily or permanently during the progress of the Work. The Owner may thereafter withhold further payments until the full amount of the five percent is reestablished. The Contractor may deposit with the Maine State Treasurer certain securities in place of retainage amounts due according to Maine Statute (5 M.R.S. §1746).

33.2 The Consultant may withhold or nullify the whole or a portion of any Requisitions for Payment submitted by the Contractor in the amount that may be necessary, in his reasonable opinion, to protect the Owner from loss due to any of the following:

.1 defective work not remedied;
.2 claims filed or reasonable evidence indicating probable filing of claims;
.3 failure to make payments properly to Subcontractors or suppliers;
.4 a reasonable doubt that the contract can be completed for the balance then unpaid;
.5 liability for damage to another contractor.

The Owner shall make payment to the Contractor, in the amount withheld, when the above circumstances are removed.

34. Liens

34.1 The Contractor shall deliver to the Owner a complete release of all liens arising out of this contract before the final payment or any part of the retainage payment is released. The Contractor shall provide with the release of liens an affidavit asserting each release includes all labor and materials for which a lien could be filed. Alternately, the Contractor, in the event any Subcontractor or supplier refuses to furnish a release of lien in full, may furnish a bond satisfactory to the Owner, to indemnify the Owner against any lien.

34.2 In the event any lien remains unsatisfied after all payments to the Contractor are made by the Owner, the Contractor shall refund to the Owner all money that the latter may be compelled to pay in discharging such lien, including all cost and reasonable attorney's fees.

35. Workmanship

35.1 The Contractor shall provide materials, equipment, and installed work equal to or better than the quality specified in the Contract Documents and approved in submittal and sample. The installation methods shall be of the highest standards, and the best obtainable from the respective trades. The Consultant's decision on the quality of work shall be final.

35.2 The Contractor shall know local labor conditions for skilled and unskilled labor in order to apply the labor appropriately to the Work. All labor shall be performed by individuals well skilled in their respective trades.

35.3 The Contractor shall perform all cutting, fitting, patching and placing of work in such a manner to allow subsequent work to fit properly, whether that be by the Contractor, the Owner's Contractors or others. The Owner and Consultant may advise the Contractor regarding such subsequent work. Notwithstanding the notification or knowledge of such subsequent work, the Contractor may be directed to comply with this standard of compatible construction by the Consultant at the Contractor's expense.

35.4 The Contractor shall request clarification or revision of any design work by the Consultant, prior to commencing that work, in a circumstance where the Contractor believes the work cannot feasibly be completed at the highest quality, or as indicated in the Contract Documents. The Consultant shall respond to such requests in a timely way, providing clarifying information, a feasible revision, or instruction allowing a reduced quality of work. The Contractor shall follow the direction of the Consultant regarding the required request for information.

35.5 The Contractor shall guarantee the Work against any defects in workmanship and materials for a period of one year commencing with the date of the Certificate of Substantial Completion, unless specified otherwise for specific elements of the project. The Work may also be subdivided in mutually agreed upon components, each defined by a separate Certificate of Substantial Completion.

36. Close-out of the Work

36.1 The Contractor shall remove from the premises all waste materials caused by the work. The Contractor shall make the spaces “broom clean” unless a more thorough cleaning is specified. The Contractor shall clean all windows and glass immediately prior to the final inspection, unless otherwise directed.

36.2 The Owner may conduct the cleaning of the premises where the Contractor, duly notified by the Consultant, fails to adequately complete the task. The expense of this cleaning may be deducted from the sum due to the Contractor.

36.3 The Contractor shall participate in all final inspections and acknowledge the documentation of unsatisfactory work, customarily called the "punch list", to be corrected by the Contractor. The Consultant shall document the successful completion of the Work in a dated Certificate of Substantial Completion, to be signed by Owner, Consultant, and Contractor.

36.4 The Contractor shall not call for final inspection of any portion of the Work that is not completely and permanently installed. The Contractor may be found liable for the expenses of individuals called to final inspection meetings prematurely.

36.5 The Contractor and all major Subcontractors shall participate in the end-of-warranty-period conference, typically scheduled close to one year after the Substantial Completion date.

37. Date of Completion and Liquidated Damages

37.1 The Contractor may make a written request to the Owner for an extension or reduction of time, if necessary. The request shall include the reasons the Contractor believes justifies the proposed completion date. The Owner may grant the revision of the contract completion date if the Work was delayed due to conditions beyond the control and the responsibility of the Contractor. The Contractor shall not conduct unauthorized accelerated work or file delay claims to recover alleged damages for unauthorized early completion.

37.2 The Contractor shall vigorously pursue the completion of the Work and notify the Owner of any factors that have, may, or will affect the approved Schedule of the Work. The Contractor may be found responsible for expenses of the Owner or Consultant if the Contractor fails to make notification of project delays.

37.3 The Project is planned to be done in an orderly fashion which allows for an iterative submittal review process, construction administration including minor changes in the Work and some bad weather. The Contractor shall not file delay claims to recover alleged damages on work the Consultant determines has followed the expected rate of progress.

37.4 The Consultant shall prepare the Certificate of Substantial Completion which, when signed by the Owner and the Contractor, documents the date of Substantial Completion of the Work or a designated portion of the Work. The Owner shall not consider the issuance of a Certificate of Occupancy by an outside authority a prerequisite for Substantial Completion if the Certificate of Occupancy cannot be obtained due to factors beyond the Contractor's control.

37.5 Liquidated Damages may be deducted from the sum due to the Contractor for each calendar day that the Work remains uncompleted after the completion date specified in the Contract or an approved amended completion date. The dollar amount per day shall be calculated using the Schedule of Liquidated Damages table shown below.

If the original contract amount is:	The per day Liquidated Damages shall be:
Less than $100,000	$250
$100,000 to less than $2,000,000	$750
$2,000,000 to less than $10,000,000	$1,500
$10,000,000 and greater	$1,500 plus $250 for each $2,000,000 over $10,000,000

38. Dispute Resolution

38.1 Mediation

38.1.1 A dispute between the parties which arises under this Contract which cannot be resolved through informal negotiation, shall be submitted to a neutral mediator jointly selected by the parties.

38.1.2 Either party may file suit before or during mediation if the party, in good faith, deems it to be necessary to avoid losing the right to sue due to a statute of limitations. If suit is filed before good faith mediation efforts are completed, the party filing suit shall agree to stay all proceedings in the lawsuit pending completion of the mediation process, provided such stay is without prejudice.

38.1.3 In any mediation between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

38.2 Arbitration

38.2.1 If the dispute is not resolved through mediation, the dispute shall be settled by arbitration. The arbitration shall be conducted before a panel of three arbitrators. Each party shall select one arbitrator; the third arbitrator shall be appointed by the arbitrators selected by the parties. The arbitration shall be conducted in accordance with the Maine Uniform Arbitration Act (MUAA), except as otherwise provided in this section.

38.2.2 The decision of the arbitrators shall be final and binding upon all parties. The decision may be entered in court as provided in the MUAA.

38.2.3 The costs of the arbitration, including the arbitrators' fees shall be borne equally by the parties to the arbitration, unless the arbitrator orders otherwise.

38.2.4 In any arbitration between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

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Wage Determination Schedule

PART 1- GENERAL

1.1 Related Documents
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications Sections, apply to this Section.

1.2 Summary
A. This Section includes the wage determination requirements for Contractors as issued by the State of Maine Department of Labor Bureau of Labor Standards or the United States Department of Labor.

1.3 Requirements
A. Conform to the wage determination schedule for this project which is shown on the following page.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

State of Maine Department of Labor - Bureau of Labor Standards
Augusta, Maine 04333-0045 - Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2024 Fair Minimum Wage Rates -- Building 2 Penobscot County (other than 1 or 2 family homes)

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$32.25	$2.95	$35.20
Bulldozer Operator	$31.50	$7.53	$39.03
Carpenter	$19.57	$18.35	$37.92
Cement Masons And Concrete Finisher	$22.63	$3.67	$26.30
Commercial Divers	$30.00	$4.62	$34.62
Construction And Maintenance Painters	$21.00	$0.97	$21.97
Construction Laborer	$22.00	$2.31	$24.31
Crane And Tower Operators	$34.00	$10.12	$44.12
Crushing Grinding And Polishing Machine Operators	$23.00	$4.94	$27.94
Drywall And Ceiling Tile Installers	$26.20	$10.62	$36.82
Earth Drillers - Except Oil And Gas	$21.41	$5.51	$26.92
Electrical Power - Line Installer And Repairers	$38.93	$8.91	$47.84
Electricians	$37.58	$6.36	$43.94
Elevator Installers And Repairers	$68.38	$45.29	$113.67
Excavating And Loading Machine And Dragline Operators	$26.00	$7.01	$33.01
Excavator Operator	$31.38	$5.91	$37.29
Fence Erectors	$26.75	$4.05	$30.80
Flaggers	$20.00	$0.38	$20.38
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$23.00	$1.99	$24.99
Hazardous Materials Removal Workers	$20.63	$1.25	$21.88
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$30.08	$5.49	$35.57
Heavy And Tractor - Trailer Truck Drivers	$21.50	$0.95	$22.45
Highway Maintenance Workers	$20.00	$0.00	$20.00
Industrial Machinery Mechanics	$31.25	$1.01	$32.26
Industrial Truck And Tractor Operators	$29.25	$4.06	$33.31
Insulation Worker - Mechanical	$23.00	$3.59	$26.59
Ironworker - Ornamental	$29.00	$11.24	$40.24
Light Truck Or Delivery Services Drivers	$23.34	$1.67	$25.01
Millwrights	$33.75	$8.78	$42.53
Mobile Heavy Equipment Mechanics - Except Engines	$27.75	$4.89	$32.64
Operating Engineers And Other Equipment Operators	$24.00	$2.38	$26.38
Paver Operator	$27.03	$6.49	$33.52
Pile-Driver Operators	$32.75	$1.95	$34.70
Pipelayers	$28.50	$4.89	$33.39
Plumbers Pipe Fitters And Steamfitters	$29.50	$5.48	$34.98
Pump Operators - Except Wellhead Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$26.00	$3.77	$29.77
Reclaimer Operator	$27.03	$7.68	$34.71
Reinforcing Iron And Rebar Workers	$30.83	$24.97	$55.80
Riggers	$29.25	$7.79	$37.04
Roofers	$23.00	$3.13	$26.13
Screed/Wheelman	$29.25	$4.94	$34.19
Sheet Metal Workers	$26.00	$6.39	$32.39
Structural Iron And Steel Workers	$30.83	$24.97	$55.80
Tapers	$25.00	$5.11	$30.11
Telecommunications Equipment Installers And Repairers - Except Line Installers	$30.00	$2.39	$32.39
Telecommunications Line Installers And Repairers	$23.00	$5.16	$28.16
Tile And Marble Setters	$27.75	$6.73	$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Work covered by the Contract Documents.
   2. Type of the Contract.
   3. Work schedule.
   4. Work under other contracts.
   5. Use of premises.
   6. Owner's occupancy requirements.
   7. Work restrictions.
   8. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: DDPC - IF&W Window Replacement

B. Project Location: Dorothea Dix Psychiatric Campus, Bangor, Maine

C. Owner: State of Maine
   1. Owner's Representative: Linda Greeley

D. Architect: Harriman, 46 Harriman Drive, Auburn, Maine.

1.4 TYPE OF CONTRACT

A. Project will be constructed under a single prime contract.

1.5 PERMITS

A. The Contractor is responsible for obtaining all permits required by the City of Bangor.

1.6 WORK SCHEDULE

A. The construction start dates shall be as follows:
   1. Contractor mobilization shall be on a date to be determined by the Owner.

B. Completion dates for the work:

1. The work shall be substantially complete on or before (6) six months after contract is awarded. Final completion, including completion of punch list items shall be done on or before (9) months after contract is awarded.

C. Time: The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

1.7 WORK UNDER OTHER CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts. References to concurrent work included throughout the contract documents is intended to identify areas of potential overlap and conflict but does not necessarily capture all work under separate contracts. The Contractor shall coordinate fully with the Architect, Owner, and separate contractors prior to the commencement of work to identify all potential conflicts between separate contractors and to confirm scheduling requirements for a successful project completion.

1.8 USE OF PREMISES

A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.

B. Use of Site: Limit use of premises to areas within the Contract limits indicated: identified as the IF&W Building and its adjacent parking areas. Access on or near the hospital grounds is strictly prohibited. Do not disturb portions of Project site beyond areas in which the Work is indicated.
   1. Owner Occupancy: Allow for Owner occupancy of facilities adjacent to the work and use by the public.
   2. Driveways and Entrances: Keep driveways, parking, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
      a. Schedule deliveries to minimize use of driveways and entrances.
      b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Campus Tobacco Use Policy: A tobacco-free campus has been established at the Dorothea Dix Psychiatric Campus (DDPC).
   1. The DDPC is a tobacco-free campus. This policy applies to all staff, contractors, vendors and visitors. The use of tobacco and all smoking products is not permitted on any DDPC property, which includes but is not limited to, buildings, campus grounds, parking areas, and walkways,.
   2. Tobacco use by definition includes the possession of any lighted tobacco products, or the use of any type of smokeless tobacco, including but not limited to chew, snuff, snus, electronic cigarettes, and all other nicotine delivery devices that are non-FDA approved as cessation products.
   3. It is the shared responsibility of all members of the campus community to respect and abide by this policy. The successful implementation of this policy depends on the courtesy and cooperation of the entire campus community.

D. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building during construction period.

1.9 OWNER'S OCCUPANCY REQUIREMENTS

A. During the construction period the building is not intended to be occupied outside of general maintenance. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
   1. Maintain access to existing walkways, roadways, and other adjacent occupied or used facilities. Do not close or obstruct walkways, roadways, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
   2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
   3. Provide protective coverings for all furnishings (flooring, desks, shelves, equipment, etc..) that remain in the building to ensure that no damage occurs during construction.

B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of Work, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
   1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.

1.10 WORK RESTRICTIONS

A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, except otherwise indicated.
   1. Early Morning Hours: Contractor allowed access to site during early morning hours (prior to 7:00 am) upon request and approval of the owner.
   2. Hours for Utility Shutdowns: to be coordinated with the Owner a minimum of two weeks prior to the estimated time of work.
   3. Hours for Core Drilling and Concrete Saw Cutting: Work shall be performed during Early Morning Hours and be coordinated with the Owner a minimum of two weeks prior to the estimated time of work.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Architect and Owner not less than two weeks in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Owner's written permission.
   3. Shutdown of building electrical service shall be only after indicated temporary electrical service is in place and critical loads have been cut over.

C. Worker Supervision:
   1. The Contractor shall supervise the actions of employees and sub-contractors with regard to inappropriate activity at the site. Comply with the following requirements:
      a. Sexual harassment of any nature will not be tolerated.

b. No pornography on property.
c. No alcohol on property.
d. No drugs on property.
e. No guns or weapons on property.
f. No smoking or vaping on property.

2. Failure to comply with the requirements outlined above will result in immediate action by the Owner. First Offense: The individual removed permanently from premises. Second Offense: The responsible subcontractor removed permanently from premises.

1.11 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "2004 Master Format" numbering system.
1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.12 MISCELLANEOUS PROVISIONS

A. Material safety data sheets shall be made available in accordance with OSHA requirements.

B. No asbestos containing materials shall be used in the work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:
   1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
   1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
   2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Substitution Request Form: Use form acceptable to Architect.
   2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
      b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
      c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific

features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
   a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
   b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
   1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
      a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
      b. Substitution request is fully documented and properly submitted.
      c. Requested substitution will not adversely affect Contractor's construction schedule.
      d. Requested substitution has received necessary approvals of authorities having jurisdiction.
      e. Requested substitution is compatible with other portions of the Work.
      f. Requested substitution has been coordinated with other portions of the Work.
      g. Requested substitution provides specified warranty.
      h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

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SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

B. Related Sections include the following:
   1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
   1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
   2. Within 20 days after receipt of Proposal Request or earlier as specified in Proposal Request issued, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
      a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
      b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
      c. Include costs of labor and supervision directly attributable to the change.
      d. Include quotes on supplier’s and subcontractor’s letterhead for the requested change.
      e. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float time before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
   1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
   2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
   3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
   4. Include costs of labor and supervision directly attributable to the change.
   5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float time before requesting an extension of the Contract Time.
   6. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Proposal Requests, or format as approved by the Owner.

1.5 ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
   1. Include installation costs in purchase amount only where indicated as part of the allowance.
   2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
   3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
   4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within 21 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 21 days after such authorization.
   1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
   2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.6 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a University of Maine Change Order form for signatures of Owner and Contractor.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
   1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
   1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

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SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract Documents, including General Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. The forms for application for payment, duly notarized, shall be the current authorized edition of the AIA Document G702, Application for Payment, supported by a current authorized edition of AIA G703, Continuation Sheet. Samples of these, and other required AIA documents, are provided in the Contract Documents under Division 00 for informational purposes only.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Construction Schedule.
   1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
      a. Application for Payment forms with Continuation Sheets.
      b. Submittals Schedule.
      c. Contractor's Construction Schedule.
   2. Submit the Schedule of Values to Architect prior to the pre-construction meeting.

B. Format and Content: Use the specification table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
   1. Identification: Include the following Project identification on the Schedule of Values:
      a. Project name and location.
      b. Name of Architect.
      c. Contractor's name and address.
      d. Date of submittal.
   2. Submit draft of AIA G702 Application for Payment form and AIA G703 Continuation Sheet (Schedule of Values) form.
   3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
      a. Related Specification Section or Division.
      b. Description of the Work.
      c. Name of subcontractor.

d. Name of manufacturer or fabricator.
e. Name of supplier.
f. Change Orders (numbers).
g. Dollar value.

4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Specification table of contents. Provide several line items for principal subcontract amounts, where appropriate.
   a. For each line item, provide a sublist breakdown as follows:
      1) Material.
      2) Labor.
5. Documentation: Submit proper documentation for the amounts being requisitioned from subcontractors and material suppliers with each Application for Payment. Three (3) copies of an Application for Payment or a Payment Requisition are required for all subcontracted work. Three (3) copies of the invoice is required for each major supplier.
6. Stored Materials: If Contractor is requesting payment for stored materials as part of the Application for Payment, Contractor must complete Column F in the G703 Continuation Sheet (Schedule of Values) to record the stored materials amounts against line items that pertain to those stored materials. Stored materials are materials or equipment purchased or fabricated and stored, but not yet installed or incorporated into the Work.
   a. Complete and provide three (3) copies of 00 62 79 Stored Materials form with all required documentation. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
   b. Only major long lead delivery items may be considered for off-site storage (example: long lead custom mechanical unit). Standard order and production materials and products shall be delivered to the site before including in Application for Payment of such items.
7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
   a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place shall be shown as separate line items in the Schedule of Values.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when approved Change Orders or Construction Change Directives result in a change in the Contract Sum.
10. Retainage: The required five percent (5%) retainage held per Application for Payment submission shall be accounted for on the G703 on a per line item basis. Each line item with a value in Column G “Total Completed and Stored To Date” shall have a corresponding five percent retainage value entered in Column I.
    a. Final Release of Retainage: The final release of retainage shall be entered as a separate line item on the G703 as “Final Release of Retainage” with the full amount of the five percent retainage entered as a negative number in Column I. The final release of retainage request is submitted as a separate application.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
   1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: G702 Application for Payment shall be submitted to Architect and Owner not less than seven (7) days before monthly progress meeting. The period covered by each Application for Payment is one (1) month, ending on the last day of the month.

C. Payment Application Forms: The Contractor is required under the Contract Documents to use official original AIA documents. Samples of the required documents are provided in Division 00 of the Specifications.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
   1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
   2. Include amounts of approved Change Orders and Construction Change Directives issued before last day of construction period covered by application.

E. Transmittal:
   1. Submit three (3) signed and notarized originals of:
      a. AIA G702 Application & Certificate for Payment.
      b. AIA G703 Continuation Sheet.
      c. AIA G706 Contractor's Affidavit of Payment of Debts & Claims.
      d. AIA G706A Contractor's Affidavit of Release of Liens.
      e. 00 65 19.17 Waiver of Lien.
   2. Transmit each Application for Payment with a transmittal form listing attachments and recording appropriate information about submission.

F. Waivers of Mechanic's Lien: With each Application for Payment, submit three (3) copies of waivers of mechanic's lien from subcontractors, sub-subcontractors, major suppliers, and every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
   1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
   2. When an application shows completion of an item, submit final waivers.
   3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
   4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
   5. Waiver Forms: Submit 00 65 19.17 Waiver of Lien forms, executed in a manner acceptable to Owner.

G. Certified Payrolls: Wages paid to all workers performing work on the Project shall be in accordance with the Section 00 73 64 Wage Determination Schedule for the Project. Contractor shall submit one (1) copy of each weekly certified payroll for Contractor and all subcontractors, sub-subcontractors, sub-sub-subcontractors, etc. performing work on the Project during the time covered by the Application for Payment The certified payroll

shall be completed in accordance with Section 3.4.4 of the A201 General Conditions and contain the following information:

1. Contractor name.
2. Contractor address.
3. Period number.
4. Week ending date.
5. Employee(s)'s name.
6. Employee(s)'s job title.
7. Employee hourly wage:
    a. Straight time rate.
    b. Overtime rate.
8. Hours worked per day (broken down by straight time and overtime hours).
9. Hours worked per week (broken down by straight time and overtime hours).
10. Total earned for the week:
    a. Straight time.
    b. Overtime.
11. Benefits that form a part of the wage rate.
12. The signature and name of the authorized payroll person.

H. Initial Application for Payment: Administrative actions and submittals that must precede submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule.
4. Submittals Schedule.
5. List of Contractor's staff assignments.
6. List of Contractor's principal consultants.
7. Copies of building permits and other required permits.
8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
9. Initial progress report.
10. Report of preconstruction conference.
11. Insurance verification through submission of insurance certificates, for all Subcontractors.

I. Progress Applications for Payment: Administrative actions and submittals that must precede or coincide with submittal of progress Applications for Payment include the following:

1. Contractor's Construction Schedule update.
2. Submittals for Work being requisitioned that are complete and approved.
3. Submission of list of completed tests, checklists, commissioning, reports, and similar requirements for the work that are submitted and in compliance with the Contract Documents.
4. Distribution of minutes of previous month's progress meeting.
5. Current record drawings.

J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion, less retainage, for portion of the Work claimed as substantially complete. Application must:

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. Reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

K. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited to, the following:
   1. Evidence of completion of Project closeout requirements.
   2. Insurance certificates for products and completed operations where required and proof that fees and similar obligations were paid.
   3. Updated final statement, accounting for final changes to the Contract Sum.
   4. AIA G707 Consent of Surety to Final Payment, three (3) originals.
   5. Evidence that claims have been settled.
   6. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
   7. Final, liquidated damages settlement statement, if a liquidated damages claim has been processed.
   8. As-built drawings.
   9. Operation and maintenance manuals.
   10. Final lien waivers.
   11. All training and equipment testing is complete.

PART 2 - NOT USED

PART 3 - NOT USED

END OF SECTION 012900

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SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. Administrative and supervisory personnel.
   2. Project meetings.

B. Related Sections include the following:
   1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
   2. Division 01 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.
   4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components.

B. Coordinate with contractors doing work for the Owner under separate contracts.

C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
   1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Project closeout activities.

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings as determined by the Contractor and subcontractors, if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
   1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
      a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
      b. Indicate required installation sequences.
      c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
   1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
   1. Include special personnel required for coordination of operations with other contractors.

1.6 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
   1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.

2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for requests for interpretations (RFIs).
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures.
    k. Preparation of Record Documents.
    l. Use of the premises.
    m. Work restrictions.
    n. Owner's occupancy requirements.
    o. Responsibility for temporary facilities and controls.
    p. Construction waste management and recycling.
    q. Parking availability.
    r. Office, work, and storage areas.
    s. Equipment deliveries and priorities.
    t. First aid.
    u. Security.
    v. Progress cleaning.
    w. Working hours.
    x. USM campus operational protocols and procedures.
3. Minutes: Record and distribute meeting minutes.
    a. Include action items and responsible party.

C. Progress Meetings: Conduct progress meetings at intervals as required by the project schedule. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
        1) Review schedule for next period.
    b. Application for Payment: Contractor shall bring copy of Application for Payment to meeting. Review Application for Payment and required attachments, including record drawing and documents status, waivers of mechanic's liens, list of completed tests, checklists, commissioning, reports, and similar requirements for the work are submitted and in compliance with the Contract Documents.
    c. Review present and future needs of each entity present, including the following:
        1) Interface requirements.
        2) Sequence of operations.
        3) Status of submittals.
        4) Deliveries.
        5) Off-site fabrication.
        6) Access.
        7) Site utilization.
        8) Temporary facilities and controls.
        9) Work hours.
        10) Hazards and risks.
        11) Progress cleaning.
        12) Quality and work standards.
        13) Status of correction of deficient items.
        14) Field observations.
        15) Requests for interpretations (RFIs).
        16) Status of proposal requests.
        17) Pending changes.
        18) Status of Change Orders.
        19) Pending claims and disputes.
        20) Documentation of information for payment requests.
3. Minutes: Record and distribute the meeting minutes.
    a. Include action items and responsible party.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
    a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Preliminary Construction Schedule.
   2. Contractor's Construction Schedule.
   3. Submittals Schedule.
   4. Field condition reports.
   5. Special reports.

B. Related Sections include the following:
   1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
   2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
   3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
   4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
   1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
   2. Predecessor Activity: An activity that precedes another activity in the network.
   3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Event: The starting or ending point of an activity.

F. Float: The measure of leeway in starting and completing an activity.
   1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
   2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
   3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

H. Major Area: A story of construction, a separate building, or a similar significant construction element.

I. Milestone: A key or critical point in time for reference or measurement.

J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
   1. Scheduled date for first submittal.
   2. Specification Section number and title.
   3. Submittal category (action or informational).
   4. Name of subcontractor.
   5. Description of the Work covered.
   6. Scheduled date for Architect's final release or approval.

B. Preliminary Construction Schedule: Submit two copies.
   1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.

C. Preliminary Network Diagram: Submit two copies, large enough to show entire network for entire construction period. Show logic ties for activities.

D. Contractor's Construction Schedule: Submit two copies of initial schedule, large enough to show entire schedule for entire construction period.

E. CPM Reports: Concurrent with CPM schedule, submit two copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
   1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
3. Total Float Report: List of all activities sorted in ascending order of total float.
4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

F. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

G. Special Reports: Submit two copies at time of unusual event.

1.5 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Initial Submittal: Submit concurrently with preliminary network diagram. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.
4. The Owner will review the schedule of submittals and identify the submittals that they want to receive a copy of at the same time that the Architect’s copies are sent out.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
   1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
   1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
   2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
   3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
   4. Startup and Testing Time: Include times for startup and testing.
   5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
   1. Phasing: Arrange list of activities on schedule by phase.
   2. Work under More Than One Contract: Include a separate activity for each contract.
   3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
   4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
   5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
   6. Work Restrictions: Show the effect of the following items on the schedule:
      a. Coordination with existing construction.
      b. Limitations of continued occupancies.
      c. Uninterruptible services.
      d. Partial occupancy before Substantial Completion.
      e. Use of premises restrictions.
      f. Provisions for future construction.
      g. Seasonal variations.
      h. Environmental control.
      i. Restriction of noise making operations during final exam weeks.

E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Mechanical Commissioning, Substantial Completion, and Final Completion.

F. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

1. Refer to Division 01 Section "Payment Procedures" for cost reporting and payment procedures.
2. Contractor shall assign cost to construction activities on the CPM schedule. Costs shall not be assigned to submittal activities unless specified otherwise but may, with Architect's approval, be assigned to fabrication and delivery activities. Costs shall be under required principal subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training.
3. Each activity cost shall reflect an accurate value subject to approval by Architect.
4. Total cost assigned to activities shall equal the total Contract Sum.

G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragments to demonstrate the effect of the proposed change on the overall project schedule.

H. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.

2.3 BROAD SCOPE MILESTONE SCHEDULE

A. Submit a separate general broad scope schedule to provide a basic progress report for the Owner’s use. Examples of broad scope line items to include are: Site Work, Cast-In-Place Concrete, Framing, Rough MEP, Building Envelope, Interior Finishes, Exterior Finishes, Final MEP, Commissioning, 2 Week IAQ Flush Out, Certificate of Occupancy. Update schedule on a monthly basis for submission at project meetings.

2.4 REPORTS

A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

A. General: Submit special reports to Architect within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
   1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
   2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
   3. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
   1. Post copies in Project meeting rooms and temporary field offices.
   2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES (2023)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:
1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. 013100 “Project Management and Coordination” for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
4. Section 014000 "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
5. Section 017700 "Closeout Procedures" for submitting warranties.
6. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
7. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
8. Section 017900 "Demonstration and Training" for submitting documentation of demonstration of equipment and training of Owner's personnel.
9. Division 01 to 33 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Portable Document Format (PDF): An open standard file format used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Electronic Document Files: Copies of the Contract Drawings in electronic format will be made available by the Architect to those requesting same in accordance with the "Agreement Between Harriman (Architect & Engineer of Record) and Owner or Contractor for Release of Electronic Documents" form attached to the end of this section. Agreement form shall be filled out and signed by each party requesting electronic documents before electronic media is released to them.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Submit all submittal items required for each specification section concurrently.
   3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
   4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
   5. No products shall be incorporated into the work unless they have been approved by the Contractor and Architect. No work will be paid for until required submittals for applicable work have been submitted and approved.

C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.

D. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
   1. Initial Review: Allow 14 calendar days minimum for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
   3. Resubmittal Review: Allow 14 calendar days minimum for review of each resubmittal.
   4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 calendar days minimum for initial review of each submittal.

E. Electronic Submittals: **Architect is using Newforma software to process electronic submittals**. Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into single files incorporating submittal requirements of a single specification section and transmittal form.
    a. Provide a separate transmittal form for Product Data, a separate transmittal form for Shop Drawings, and a separate transmittal form for Informational Submittals required by each Specification Section.
    b. Maximum File Size: A single file size, up to 18 MB can be received. Contact Architect for instructions if file exceeds 18 MB.
    c. For each transmittal, attach one single PDF only. Where multiple PDFs are required for a transmittal, utilize a combine feature to merge the PDFs into a single PDF.
        1) Unacceptable Formats: In order to process the transmittals in Newforma, the single PDF file protocol must be followed. Transmittals zip files or grouped PDFs cannot be electronically processed and will be returned without action for correction and resubmittal.
        2) Submittals will be returned without action for correction and resubmittal if:
            a) Submittal does not have an electronic Transmittal Form.
            b) Multiple specification sections are contained within a single Transmittal form. Submittals must be separated into individual Specification Sections.
            c) Submittal does not include the Contractors' signed reviewed stamp
2. Name file with submittal number or other unique identifier, including revision identifier.
    a. File name shall use project identifier and Specification Section number followed by a dash and then a sequential number (e.g., LNHS-061000-01). Resubmittals shall include an alphabetic suffix after another dash (e.g., LNHS-061000-01-A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.
    g. Submittal number or other unique identifier, including revision identifier.
        1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
    h. Specification Section number and title.
    i. Drawing number and detail references, as appropriate.
    j. Location(s) where product is to be installed, as appropriate.
    k. Related physical samples submitted directly.
    l. Indication of full or partial submittal.
    m. Other necessary identification.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract

Documents, including minor variations and limitations. Include same identification information as related submittal.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with appropriate notation from Architect's action stamp.

I. Architect will return all processed submittals through the Newforma file transfer procedure. Contractor will be responsible for incorporating the processed submittals into their file management systems as appropriate.

J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

K. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with appropriate notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Submit electronic submittals by either of the following methods:
a. Via email as PDF electronic file to **constructadmin@harriman.com** .
1) Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
b. Post electronic submittals as PDF electronic files directly to Architect's FTP site specifically established for Project.
1) Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.

c. Standard color charts.
d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.
h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:
   a. Wiring diagrams showing factory-installed wiring.
   b. Printed performance curves.
   c. Operational range diagrams.
   d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
5. Submit Product Data before or concurrent with Samples.
6. Submit Product Data in the following format:
   a. PDF electronic file.
7. Do not submit Material Safety Data Sheets (MSDSs).

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
   a. Dimensions.
   b. Identification of products.
   c. Schedules.
   d. Compliance with specified standards.
   e. Notation of coordination requirements.
   f. Notation of dimensions established by field measurement.
   g. Relationship and attachment to adjoining construction clearly indicated.
   h. Seal and signature of professional engineer if specified.
2. Submit Shop Drawings in the following format:
   a. PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of applicable Specification Section.
   e. Specification paragraph number and generic name of each item.
3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
   a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
   a. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned.
      1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:
   a. PDF electronic file.

F. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."

G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."

H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."

I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."

K. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."

L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
   1. Name of evaluation organization.
   2. Date of evaluation.
   3. Time period when report is in effect.
   4. Product and manufacturers' names.
   5. Description of product.
   6. Test procedures and results.
   7. Limitations of use.

U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

Y. Material Safety Data Sheets (MSDSs): Submit information directly to Owner at end of the project; do not submit to Architect. Maintain copy at the site for the duration of the construction.
1. Architect will not review submittals that include MSDSs and will return them.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Contractor to mark submittal with their approval stamp before submitting to Architect.
1. The Contractor shall review submittals for completeness and compliance with the Contract Documents. If submittal contains substitutions, Contractor shall process substitutions in accordance with Division 01 Section “Substitutions and Product

Options," and not part of specified Shop Drawings or Product Data submittals. Contractor is responsible for keeping Subcontractors on time with the submittal schedule. If the Contractor submits submittals that are repeatedly rejected, requiring the Architect to perform multiple reviews of the same submittal because of the failure to properly prepare and complete the submittals:

a. Owner will compensate Architect for such additional services.
b. Owner will deduct the amount of such compensation from the final payment to the Contractor.

B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's submittal stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an appropriate mark to indicate status.

1. The Architect's marking of "Reviewed, Furnish as Corrected or similar verbiage means submittal has been reviewed for general conformance to the contract documents only and does not mean unqualified acceptance. The Contractor is fully responsible for compliance with the contract documents.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

F. Submittals not required by the Contract Documents will be returned by the Architect without action.

END OF SECTION 013300

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AGREEMENT BETWEEN HARRIMAN (ARCHITECT & ENGINEER OF RECORD)
AND OWNER OR CONTRACTOR
FOR RELEASE OF ELECTRONIC DOCUMENTS

RECIPIENT:

Name: _____ Phone Number: _____

Address: _____

Email Address: _____ Date: _____

Project Name: _____ HA Project No.: _____

- This request to for Harriman to provide the following Electronic Documents (AutoCad file or Revit model), dated _____, for the project use by the Recipient:

(List requested documents clearly)_____

_____

- Electronic Documents will be provided in the current software version used by Harriman at the time of the request. Alternate versions may be available at Harriman's discretion. Current software versions are AutoCAD 2023 and Autodesk Revit 2023.

  Alternate Version Requested: _____

- Transfer method shall be by Electronic File Transfer to the email address provided above.

- A fee may be assessed for processing and distributing requested document. Recipient will be notified on any fees prior after receipt of this request document. Fees are payable prior to receiving requested documents.

TERMS AND CONDITIONS:

1. For the purpose of this document, both 2d CAD files and 3d Revit models shall be collectively defined as "Electronic Documents".

2. It is understood and agreed that all drawings, specifications, or other documents of any kind prepared by Harriman or its subconsultants, whether in hard copy or in electronic format including Electronic Documents (collectively " Harriman's Documents"), are instruments of their services prepared solely for use in connection with the single project for which they were prepared and that Harriman and its subconsultants retain all common law, statutory and other reserved rights, including the copyright. This agreement is not intended in any way to alter the respective interests of the parties in the Instruments of Service as set forth in the Owner/Architect Agreement, notwithstanding Harriman's agreement to release the Electronic Documents to Recipient.

3. The Electronic Documents are provided as a convenience to the Recipient for informational purposes only in connection with the Recipient's performance of its responsibilities and obligations relating to the Project. The Electronic Documents do not replace or supplement the paper copies of the Drawings and Specifications, which are, and remain, the Contract Documents for the Project. In all instances, it is the responsibility of the Recipient to ensure that the Electronic Documents are

consistent with the Contract Documents.

4. The parties agree that the Electronic Documents are not, nor shall they be construed to be, a product. It is expressly agreed by the Recipient that there are no warranties of any kind in such Electronic Documents or in the media in which they are contained, either expressed or implied.

5. Harriman makes no representation as to the compatibility of the Electronic Documents with any hardware or software.

6. Since the information set forth on the Electronic Documents can be modified unintentionally or otherwise, Harriman reserves the right to remove all indicia of its ownership and/or involvement from each electronic display.

7. If any differences exist between printed Instruments of Service and Electronic Documents, the information contained in the printed documents shall be presumed to be correct and take precedence over the Electronic Documents.

8. Recipient agrees not to add to, modify or alter in any way, or to allow others to add to, modify or alter in any way, the Electronic Documents or any printed copies thereof.

9. Revit models are Design Models and will only contain elements and content that Harriman deems necessary and appropriate to share. Not all objects in the models are 3d objects and no specific Level of Detail is implied or expected. Consequently, the models cannot be used to extract precise material or object quantities. The Recipient agrees that no proprietary Revit families or Revit content shall be removed from the model and/or used for any other purpose but to support this specific project.

10. The Electronic Documents are supplied in a translatable format. Any conversion of the format is solely the responsibility of the Recipient. Recipient understands and agrees that the conversion of hard copies of Instruments of Service into electronic format or the conversion of Electronic Documents from formats used by Harriman to some other format may introduce errors or other inaccuracies. Recipient agrees to accept all responsibility for any errors or inaccuracies and to release Harriman, and its subconsultants from any liability or claims for recovery of damages or expenses arising as the result of such errors or inaccuracies.

11. Where the Recipient has received specific permission to use the Electronic Documents in connection with the Recipient's obligation to prepare certain documents for Project, Recipient shall, in addition to the other obligations set forth therein, be obligated to remove Harriman's or its Consultant's title block from the copy of the Electronic Documents used by Recipient. It is understood and agreed that, without the separate express written permission of Harriman to do so, the Electronic Documents are not to be used by any contractor or any of its subcontractors of any tier of material supplier or vendor as a shop drawing or any other type of submittal or as the basis for preparing such shop drawing or submittal. The sole exception to this prohibition shall be that the Recipient may use the Electronic Documents as a clearly distinguishable separate background upon which to prepare its shop drawings or other submittal.

12. Recipient further agrees that Harriman's Documents were prepared for use in connection with this project only and that the Electronic Documents are supplied to Recipient for the limited use stated above only. Recipient agrees not to use, or to allow others to use, the Electronic Documents, in whole or in part, for any purpose other than as stated above.

13. Harriman believes that no licensing or copyright fees are due to others on account of the transfer of the Electronic Documents, but to the extent any are, the Contractor will pay the appropriate fees and hold Harriman harmless from such claims.

14. Any purchase order number provided by the Contractor is for Contractor's accounting purposes only. Purchase order terms and conditions are void and are not a part of this agreement.

15. Harriman has prepared these Electronic Documents for the sole purpose of plotting and printing a hard copy of the design documents. Harriman believes only the hard copy print to be the accurate representation of all drawing information. Hard copy written dimensions override electronic measured dimensions. User must verify computer data against hard copy prints.

16. Electronic Documents are an inherently unstable medium subject to "bugs," deterioration, modifications, and viruses. Electronic Documents are subject to inadvertent changes in the process of moving from one computer to another or by compressing/decompressing the data; or by moving from one software revision to another; or any kind of manipulation of the data will lead to defects.

17. This agreement shall be governed by the laws of the principal place of business of Harriman. Only printed copies of the Instrument of Service shall be signed and sealed.

18. Recipient agrees to waive any and all claims and liability against Harriman and its subconsultants resulting in any way from any failure by Recipient to comply with the requirements of this Agreement for the Delivery of Documents in Electronic Format.

19. The Recipient agrees that no third-party beneficiary status or any other right of action is created in favor of any contractor, subcontractor, materialmen or other third party against Harriman by virtue of this Agreement or in connection with its delivery of Electronic Documents, and no third-party beneficiary status is intended.

20. Recipient further agrees to indemnify and save harmless Harriman and its subconsultants and each of their partners, officers, shareholders, and directors and employees from any and all claims, judgments, suits, liabilities, damages, costs or expenses (including reasonable defense and attorney's fees including claims asserted in breach of contract, breach of warranty, negligence, or any other tort) arising as a result of either: 1) Recipient's failure to comply with any of the requirements of Agreement for the Delivery of Documents in Electronic Format; or 2) a defect, error or omission in the Electronic Documents or the information contained therein, which defect, error or omission was not contained in the Contract Documents as defined in Paragraph 2 or where the use of such Contract Documents would have prevented the claim, judgment, suit, liability, damage, cost, or expense.

21. Harriman reserves the right to deny a request to translate files.

AUTHORIZED ACCEPTANCE

By Recipient	By Harriman (Architect/Engineer of Record)
_____	_____
Signature	Signature
_____	_____
Print Name and Title	Print Name and Title
_____	_____
Date	Date

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SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes special procedures for alteration work.

1.2 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

K. Retain: To keep an element or detail secure and intact.

L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.3 COORDINATION

A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
   1. Schedule construction operations in sequence required to obtain best Work results.
   2. Coordinate sequence of alteration work activities to accommodate the following:
      a. Owner's continuing occupancy of portions of existing building.
      b. Owner's partial occupancy of completed Work.
      c. Other known work in progress.
      d. Tests and inspections.
   3. Detail sequence of alteration work, with start and end dates.
   4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
   5. Use of elevator and stairs.
   6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.

1.4 PROJECT MEETINGS FOR ALTERATION WORK

A. Preliminary Conference for Alteration Work: Before starting alteration work, conduct conference at Project site.
   1. Attendees: In addition to representatives of Owner’ Representitive, Architect, and Contractor, testing service representative, specialists, and chemical-cleaner manufacturer(s) shall be represented at the meeting.
   2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:
      a. Alteration Work Subschedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
      b. Fire-prevention plan.
      c. Governing regulations.
      d. Areas where existing construction is to remain and the required protection.
      e. Hauling routes.
      f. Sequence of alteration work operations.
      g. Storage, protection, and accounting for salvaged and specially fabricated items.
      h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
      i. Qualifications of personnel assigned to alteration work and assigned duties.
      j. Requirements for extent and quality of work, tolerances, and required clearances.
      k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.
   3. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

B. Coordination Meetings: Conduct coordination meetings specifically for alteration work at intervals agreed upon by Owner and Architect. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner, Architect, and Contractor, each specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of alteration work activities shall be represented at these meetings. All participants at conference shall be familiar with Project and authorized to conclude matters relating to alteration work.
2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.
    a. Alteration Work Subschedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
    b. Schedule Updating: Revise Contractor's Alteration Work Subschedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
    c. Review present and future needs of each entity present, including review items listed in the "Preliminary Conference for Alteration Work" Paragraph in this article and the following:
        1) Interface requirements of alteration work with other Project Work.
        2) Status of submittals for alteration work.
        3) Access to alteration work locations.
        4) Effectiveness of fire-prevention plan.
        5) Quality and work standards of alteration work.
        6) Change Orders for alteration work.
3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.5 INFORMATIONAL SUBMITTALS

A. Alteration Work Subschedule:

1. Submit alteration work subschedule within seven days of date established for commencement of alteration work.

B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

C. Alteration Work Program: Submit 30 days before work begins.

1.6 QUALITY ASSURANCE

A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has

completed a minimum of five recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.

1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.

B. Hazardous Materials: Hazardous materials (lead) are presumed to be present in the windows to be removed.

1. Do not disturb hazardous materials or other items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

C. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.

D. Safety and Health Standard: Comply with ANSI/ASSP A10.6.

1.7 FIELD CONDITIONS

A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of measured drawings and preconstruction photographs.

B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

C. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 6 inches (300 mm) or more.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.
4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.

B. Temporary Protection of Materials to Remain:
1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

3.2 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.3 GENERAL ALTERATION WORK

A. Have specialty work performed only by qualified specialists.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 013233 "Photographic Documentation."

D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
   1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
   1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
   2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
   3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
   4. The Owner will hire an independent firm to do the testing and balancing of the air system and to do mechanical commissioning.

C. Related Sections include the following:
   1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
   2. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
   3. Divisions 02 through 33 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where

indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.

D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
   1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
   1. Specification Section number and title.
   2. Description of test and inspection.
   3. Identification of applicable standards.
   4. Identification of test and inspection methods.
   5. Number of tests and inspections required.
   6. Time schedule or time span for tests and inspections.
   7. Entity responsible for performing tests and inspections.
   8. Requirements for obtaining samples.
   9. Unique characteristics of each quality-control service.

C. Reports: Prepare and submit certified written reports that include the following:
   1. Date of issue.
   2. Project title and number.
   3. Name, address, and telephone number of testing agency.
   4. Dates and locations of samples and tests or inspections.
   5. Names of individuals making tests and inspections.
   6. Description of the Work and test and inspection method.
   7. Identification of product and Specification Section.
   8. Complete test or inspection data.
   9. Test and inspection results and an interpretation of test results.
   10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
   11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
   12. Name and signature of laboratory inspector.
   13. Recommendations on retesting and re-inspecting.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
   1. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
   1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
   2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
   1. Contractor responsibilities include the following:
      a. Provide test specimens representative of proposed products and construction.
      b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
      c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
      d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
      e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
      f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
   2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
   1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
   2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
   3. Demonstrate the proposed range of aesthetic effects and workmanship.
   4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
      a. Allow seven days for initial review and each re-review of each mockup.
   5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
   6. Demolish and remove mockups when directed, unless otherwise indicated.

K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 02 through 26.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
   1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
   2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
   3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
   1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
      a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
   2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
   3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
   4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
   5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
   1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
   2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
   3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
   4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
   5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
   6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
   1. Access to the Work.
   2. Incidental labor and facilities necessary to facilitate tests and inspections.
   3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
   4. Facilities for storage and field curing of test samples.
   5. Delivery of samples to testing agencies.
   6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
   7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
   1. Schedule times for tests, inspections, obtaining samples, and similar activities.

H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
   1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, in compliance with applicable building code.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:
   1. Date test or inspection was conducted.
   2. Description of the Work tested or inspected.
   3. Date test or inspection results were transmitted to Architect.
   4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   1. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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SECTION 014200 – REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141
ABAA	Air Barrier Association of America www.airbarrier.org	(866) 956-5888
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	ACI International (American Concrete Institute) www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216

AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association (Now part of CPA)	
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com	(405) 780-7372
APA	Architectural Precast Association www.archprecast.org	(239) 454-6989

APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)	
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (Now WCSC)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood-Preservers' Association www.awpa.com	(205) 733-4077

AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772
CCC	Carpet Cushion Council www.carpetcushion.org	(610) 527-3880
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583

CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CPA	Composite Panel Association www.pbmdf.com	(301) 670-0604
CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	Canadian Standards Association	(800) 463-6727 (416) 747-4000
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-4000
CSI	Cast Stone Institute www.caststone.org	(717) 272-3744
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA	Electronic Industries Alliance www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJCDC	Engineers Joint Contract Documents Committee www.ejdc.org	(703) 295-5000
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040

ESD	ESD Association www.esda.org	(315) 339-6937
FIBA	Federation Internationale de Basketball (The International Basketball Federation) www.fiba.com	41 22 545 00 00
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation) www.fivb.ch	41 21 345 35 35
FM Approvals	FM Approvals www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FM Global)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridaroof.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400
GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200

HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (Now CSA International)	
IBF	International Badminton Federation www.internationalbadminton.org	(6-03) 9283-7155
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 255-1561
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
	Available from ANSI www.ansi.org	(202) 293-8020
ISSFA	International Solid Surface Fabricators Association www.issfa.net	(877) 464-7732 (702) 567-8150

ITS	Intertek Testing Service NA www.intertek.com	(972) 238-5591
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association, Inc. www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(800) 797-6623 (281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926

NAGWS	National Association for Girls and Women in Sport www.aahperd.org/nagws/	(800) 213-7193, ext. 453
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-3550
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (303) 697-8441
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818

NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.com	(901) 526-5016
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The) www.ntma.com	(800) 323-9736 (540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)	
NWWDA	National Wood Window and Door Association (Now WDMA)	
OPL	Omega Point Laboratories, Inc. (Now ITS)	
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(602) 870-7540

RCSC	Research Council on Structural Connections www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association www.smacentral.org	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers www.smpte.org	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154

SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrasssod.org	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute www.tileroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USAV	USA Volleyball www.usavolleyball.org	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council www.usgbc.org	(202) 828-7422

USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association (Now WCSC)	
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4636 (212) 297-2109
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) www.wicnet.org	(916) 372-9943
WIC	Woodwork Institute of California (Now WI)	
WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICBO	International Conference of Building Officials (See ICC)	

ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)	
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543
SBCCI	Southern Building Code Congress International, Inc. (See ICC)	
UBC	Uniform Building Code (See ICC)	

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce www.commerce.gov	(202) 482-2000
DOD	Department of Defense http://.dodssp.daps.dla.mil	(215) 697-6257
DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
FAA	Federal Aviation Administration www.faa.gov	(866) 835-5322
FCC	Federal Communications Commission www.fcc.gov	(888) 225-5322
FDA	Food and Drug Administration www.fda.gov	(888) 463-6332
GSA	General Services Administration www.gsa.gov	(800) 488-3111

HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory www.lbl.gov	(510) 486-4000
NCHRP	National Cooperative Highway Research Program (See TRB)	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Building Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board http://gulliver.trb.org	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html	(866) 512-1800 (202) 512-1800

DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
DSCC	Defense Supply Center Columbus (See FS)	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
	Available from Defense Standardization Program www.dps.dla.mil	
	Available from General Services Administration www.gsa.gov	(202) 619-8925
	Available from National Institute of Building Sciences www.wbdg.org/ccb	(202) 289-7800
FTMS	Federal Test Method Standard (See FS)	
MIL	(See MILSPEC)	
MIL-STD	(See MILSPEC)	
MILSPEC	Military Specification and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation www.dca.ca.gov/bhfti	(800) 952-5210 (916) 574-2041
CCR	California Code of Regulations www.calregs.com	(916) 323-6815

CPUC	California Public Utilities Commission www.cpuc.ca.gov	(415) 703-2782
TFS	Texas Forest Service Forest Resource Development http://txforestservice.tamu.edu	(979) 458-6650

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

B. Related Sections including the following:
   1. Section 028213 “Lead Paint and Related Work”

1.2 SUMMARY

A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

B. Temporary utilities include, but are not limited to, the following:
   1. Sanitary facilities, including toilet facilities.
   2. Electric power service.

C. Support facilities include, but are not limited to, the following:
   1. Waste disposal facilities.
   2. Construction aids and miscellaneous services and facilities.
   3. Security and protection facilities include, but are not limited to, the following:
   4. Security enclosure and lockup.
   5. Temporary enclosures.

D. Related Sections include the following:
   1. Division 01 Section "Execution Requirements" for progress cleaning requirements.

1.3 DEFINITIONS

A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum.

B. The use of existing power, and water will be allowed for Work in the existing building only.

1.5 QUALITY ASSURANCE

A. The Contractor is responsible for the implementation, monitoring, and maintenance of job site safety program for the duration of the contract.

1.6 PROJECT CONDITIONS

A. Temporary Utilities: At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.

B. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

C. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
   1. Keep temporary services and facilities clean and neat.
   2. Relocate temporary services and facilities as required by progress of the Work.

D. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site. Construction noise from loud machinery, equipment, hammering and similar loud noises shall be restricted to the hours when the facility is not in use. Obey State and local noise ordinances.

E. The Contractor may use existing sinks as a water source, however disposal of any construction waste down any of the building's sinks or floor drains is strictly prohibited. Contractor is responsible for the cleanliness and functionality of the building's sinks during construction. Any repairs for damage to the sinks as a result of construction activities is the responsibility of the Contractor.

F. Any use of the existing buildings personal sanitation facilities is strictly prohibited. Including but not limited to utility, lavatory, and kitchen sinks; toilets and floor drains.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.

B. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

C. Plywood Sheathing: ½" minimum thickness. Provide as required to temporarily secure the building envelope.

2.2 EQUIPMENT

A. General: Provide equipment suitable for use intended.

B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

C. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
1. Coordinate with the Engineer and Owner at the preconstruction meeting.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. Add provisions for work not in the Contract but served by temporary facilities if required.

B. Water Service: Obtain water required for the work from location designated by the Owner.

C. Electrical Service: Provide required power cords and connect to existing outlets where available and approved for use by the owner. Provide portable power generator in all other areas.

3.3 SUPPORT FACILITIES INSTALLATION

A. Waste Disposal Facilities: Provide waste-collection dumpsters and containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 01 Section "Execution Requirements" for progress cleaning requirements.
1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.

B. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

C. Storage and Staging: Use designated areas of Project site for storage and staging needs.

D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
    a. Provide temporary, directional signs for construction personnel and visitors.
2. Maintain and touch up signs, so they are legible at all times.

E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Cherry Pickers and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

F. Existing Elevator Use: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life. Any expense as a result of corrective work to the elevator to be incurred by the Contractor.
1. Do not load elevators beyond their rated weight capacity.
2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work, so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.

G. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use. Any expense as a result of corrective work to the stairs and it’s components to be incurred by the Contractor.
1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Security Enclosure and Lockup: Building access to be coordinated with Owner. Any building access devices or keys to be returned to the Owner upon project completion. Lock entrances at end of each workday. All openings to be secured and weather tight when left at the end of each workday.

C. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. The basement and first floor openings with sills less than 12 feet above grade, must be secured weathertight with plywood. All floors above may be secured weathertight with poly sheeting.

3.5 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Restoration of Roadways and Pavement: Roadways, pavements and curbs that are broken, damaged, settled, or otherwise defective as a result of receiving, handling, storage of materials or the performance of any work under this Contract, shall be fully restored to the satisfaction of the owner and authorities having jurisdiction.

C. Restore site surfaces disturbed during construction, including stockpile and storage areas, to their pre-construction condition, or better. Leave vegetated areas smooth and finished with loam, seed, and erosion control mulch and mesh.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
   1. Materials and facilities that constitute temporary facilities are the property of Contractor.
   2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

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SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

B. Related Sections include the following:
   1. Division 01 Section “Substitutions and Product Options” for procedures and requirements for product substitutions.
   2. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
   3. Divisions 02 through 33 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
   2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
   3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

A. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
   1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
   2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:
   1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
   2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
   3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
   4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:
   1. Store products to allow for inspection and measurement of quantity or counting of units.
   2. Store materials in a manner that will not endanger Project structure.
   3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
   4. Store cementitious products and materials on elevated platforms.
   5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
   6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
   7. Protect stored products from damage and liquids from freezing.
   8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on

product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.

4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
    a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
    b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes procedural requirements for cutting and patching.
   1. For correction of installed work.
   2. For repairs due to testing.

B. Related Sections include the following:
   1. Divisions 02 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
   1. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
   2. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
   1. Primary operational systems and equipment.

2. Control systems.
3. Communication systems.
4. Electrical wiring systems.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components outside the building abatement project scope in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
1. Water, moisture, or vapor barriers.
2. Membranes and flashings.
3. Equipment supports.
4. Piping, ductwork, vessels, and equipment.
5. Noise and vibration-control elements and systems.

D. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials similar to in-place materials.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
   1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
   1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
   5. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
   2. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION 017329

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SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, and Other Specification Sections requiring or referencing demolition and construction waste apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for the following:
   1. Salvaging nonhazardous demolition and construction waste.
   2. Recycling nonhazardous demolition and construction waste.
   3. Disposing of nonhazardous demolition and construction waste.

B. Related Sections include the following:
   1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, Landlord requirements, and phasing requirements.
   2. Section 015000 “Temporary Facilities and Controls”
   3. Section 024119 “Selective Demolition”
   4. Section 028213 “Lead Paint and Related Work”

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.4 PERFORMANCE REQUIREMENTS

A. General: Manage waste in compliance with the approved Waste Management Plan, including:
   1. Construction waste.
   2. Demolition waste.
   3. Coordination with Landlord’s handling and storage requirements for excavation waste.

1.5 SUBMITTALS

A. Waste Management Plan: Submit 3 copies of plan within 7 days of the Waste Management Conference to the Owner, Landlord and Architect.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Landlord's Requirements: Provide coordination and compliance as required by the Landlord in regards to the Landlord's excavation and removal of soil or other waste management requirements that it provides, or for management of other incidental excavated soil as specified and approved by the Landlord.

C. Waste Management Conference: Conduct conference at Project site in conjunction with the Preconstruction Conference to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
   1. Review and discuss waste management plan including responsibilities of each party involved.
   2. Review and finalize procedures for materials separation and verify availability of containers and bins needed.
   3. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
   4. Review waste management requirements for each trade.

1.7 WASTE MANAGEMENT PLAN

A. General: Develop plan consisting of waste identification and waste management, including construction waste, demolition waste, and coordination with waste handling, storage and removal for the work that will be undertaken by the Landlord or others. Identify all locations where excavation below existing grade and ground floor slabs will be required. Identify the estimated amount of excavate and fill. Describe and provide for coordination and compliance with all procedures, means, and methods as required by the Landlord...

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement waste management plan as approved by Owner and Landlord. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
   1. Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
   1. Distribute waste management plan to everyone concerned.
   2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
   2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Sale and Donation: Not permitted on Project site.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
   1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
      a. Inspect containers and bins for contamination and remove contaminated materials if found.
   2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
   4. Store components off the ground and protect from the weather.
   5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING CONSTRUCTION WASTE

A. Packaging:
   1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
   2. Polystyrene Packaging: Separate and bag materials.
   3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
   4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
   1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
   1. Substantial Completion procedures.
   2. Final Completion procedures.
   3. List of incomplete items.
   4. Submittal of Project warranties.
   5. Final cleaning.
   6. Site restoration.

B. Related Requirements:
   1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.

1.2 DEFINITIONS

A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
   2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
   3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
   4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by the Owner’s Representative. Label with manufacturer's name and model number.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Advise Owner of pending insurance changeover requirements.
   2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
   3. Complete startup and testing of systems and equipment.
   4. Perform preventive maintenance on equipment used prior to Substantial Completion.
   5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
   6. Advise Owner of changeover in utility services.
   7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
   8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
   9. Complete final cleaning requirements.
   10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
   11. Complete site restoration requirements.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect Owner’s Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
   1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
   1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
   2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list will state that each item has been completed or otherwise resolved for acceptance.
   3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
   4. Submit pest-control final inspection report.
   5. Submit Final Completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architectand Owner’s Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
   1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
   1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
   2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
   3. Include the following information at the top of each page:
      a. Project name.
      b. Date.
      c. Name of Architect.
      d. Name of Contractor.
      e. Page number.
   4. Submit list of incomplete items in the following format:
      a. PDF Electronic File: Architect will return annotated file.
      b. Web-Based Project Software Upload: Utilize software feature for creating and updating list of incomplete items (punch list).

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
   1. Submit by email to Architect and Owner’s Representative.

E. Warranties in Paper Form:
   1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
   2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
   3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

F. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each window and surrounding work area to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
    b. Sweep hard floor areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    c. Remove tools, construction equipment, machinery, and surplus material from Project site.
    d. Remove snow and ice to provide safe access to building.
    e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    f. Clean flooring, removing debris, dirt, and staining; clean in accordance with manufacturer's instructions.
    g. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean in accordance with manufacturer's instructions if visible soil or stains remain.
    h. Clean transparent materials, including glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
    i. Remove labels that are not permanent.
    j. Clean work area adjacent radiators of dust and debris.
    k. Leave Project clean and ready for continued interior renovation.

C. Construction Waste Disposal: Comply with waste-disposal requirements in Section 015000 "Temporary Facilities and Controls." and Section 017419 "Construction Waste Management and Disposal."

D. Restore surfaces disturbed during construction, including stockpile and storage areas, to their pre-construction condition, or better. Leave vegetated areas smooth and finished with loam, seed, and erosion control mulch and mesh. Restore damaged paved areas with new pavement to the existing thickness.

3.2 CORRECTION OF THE WORK

A. Complete repair and restoration operations required by "Correction of the Work" Article in Division 01 before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. The Work of this Section Includes:
   1. Demolition and removal of selected portions of exterior or interior of building or structure and site elements.

B. Related Requirements:
   1. Section 013516 "Alteration Project Procedures" for general protection and work procedures for alteration projects.
   2. Section 028213 “Lead Paint and Related Work”

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner as indicated.

C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage; prepare for reuse; and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed.

1.3 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
   1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.5 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.
   1. Inspect and discuss condition of construction to be selectively demolished.

2. Review and finalize selective demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
4. Review areas where existing construction is to remain and requires protection.
5. Review and finalize protection requirements.
6. Review storage, protection, and accounting for items to be removed for salvage or reinstallation.

1.6 FIELD CONDITIONS

A. Owner will not occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

A. Hazardous Materials: Hazardous materials (lead) are presumed to be present in the windows to be removed.
1. Do not disturb hazardous materials or other items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

B. Historic Areas: Demolition and hauling equipment and other materials to be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 6 inches (150 mm) or more.

C. On-site sale of removed items or materials is not permitted.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

B. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs and measured drawings.
   1. Photograph existing conditions of adjoining construction including finish surfaces, that might be misconstrued as damage caused by selective demolition operations or removal of items for salvage or reinstallation.

3.2 PREPARATION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
   2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
   3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
   4. Cover and protect furniture, furnishings, and equipment that have not been removed.
   5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location and reinstalled in their original locations after selective demolition operations are complete.

3.3 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically. Complete selective demolition operations above each floor or area before moving on to the next level or area.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

3.5 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.6 SELECTIVE DEMOLITION SCHEDULE

A. Remove:
1. Existing exterior windows
2. Exterior wood window sills
3. Interior wood window sills
4. Exterior window opening associated wood blocking

END OF SECTION 024119

SECTION 028213 - LEAD PAINT AND RELATED WORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. General provisions of the Contract, including General and Supplementary Conditions and Other Abatement Specification Sections, apply to the work of each of the Specification Sections.

B. This section addresses abatement of lead paint related activities required for the replacement of the exterior windows only.

1.2 PROJECT SCOPE-OF-WORK

A. Provide labor, materials, and equipment to complete the work specified of this Section including, removal and lawful transport and disposal of lead containing material (LCM).

B. All lead removal work is to be completed in accordance with the requirements set forth herein. The scope-of-work includes the removal, transport, and disposal of designated LCM in the IF&W Building, Dorothea Dix Psychiatric Center, Bangor, Maine. All work is to be completed in accordance with the schedules stated herein, in the Contract Documents, and as designated by the Owner. All work is to be completed in strict accordance with applicable local, state, and federal codes and regulations and the requirements stated in this specification and Contract Documents.

C. It is essential that all work be phased and scheduled as required to facilitate Owner's window replacement.

D. Reference full inspection reports for discussions and additional information and limitations of Owner survey.

E. The work areas have or may have other regulated or hazardous materials present that are not covered in the Section including but not limited to polychlorinated biphenyl (PCB)-containing materials, mercury, guano, mold contamination, other hazardous materials, and universal waste. Contractor's OSHA-competent person shall also inspect the workplace for other potential hazardous building material during the work. If encountered during the work immediately notify Owner's Representative. Use only qualified, trained workers to remove, package, transport, and dispose (or recycle) of such material in strict compliance with all local, State, and Federal requirements.

1.3 WORK SCHEDULES

A. All work shall be completed in accordance with the schedule requirements as indicated by the Owner and as stated in the Contract Documents.

B. All work shall be strictly coordinated and scheduled by the Contractor as indicated by and approved by the Owner, the Owner's industrial hygiene consultant (IH Consultant), and the General Contractor. Work is to be phased as required to facilitate Owner operations, general occupancy of the site, and general construction activity. Contractor must provide proposed daily schedules to Owner and IH Consultant for each phase of work and each Owner work request. Adequate advance notice shall be provided to the Owner and the IH Consultant prior to any schedule changes. Start

and completion dates for the work and specific phasing requirements not otherwise specified herein shall be submitted to Owner and IH Consultant for approval. Contractor shall update all State and EPA notifications and permits as needed for schedule modifications.

1.4 CONTRACTOR ESTIMATES

A. Estimates: Contractor shall conduct necessary field measurements and site review as deemed necessary by Contractor to delineate the scope of work and site conditions prior to submittal of bid. Contractor shall note on bid any discrepancies between Contractor field measurements and listings of work stated herein. It is the responsibility of the Contractor to verify all project information and site conditions as necessary to satisfy the Contractor as to the requirements of the work for each specific phase of the project. The Contractor must notify the Owner and the IH Consultant of any conflicting information or clarifications required for the preparation of any bids, estimates, and submittal documentation.

1.5 EXISTING CONDITIONS

A. Prior to commencement of work, inspect areas in which work shall be performed. Prepare a listing and photographs of damage to structure, surfaces, finishes, insulations, and equipment that could be misconstrued as damage resulting from the work. The contractor is responsible for all damage to equipment, furnishings, finishes and building surfaces in the work area and adjacent caused by the Contractor during the course of abatement and general housecleaning. Contractor is responsible for completing all repairs to damaged items/surfaces caused by the work. In addition, Contractor must fully repair all tape, adhesive, and other staining and damage to meet or exceed existing conditions.

1.6 POTENTIAL LEAD HAZARD

A. Work involving lead-containing components, as indicated in the lead removal specification, may generate lead dust and debris, and could therefore pose a potential health hazard to both workers and other building occupants. Because lead is a cumulative and persistent toxic substance and because lead-caused health effects may result from low levels of exposure over prolonged periods of time, engineering controls and good work practices must be used to minimize employee exposure to lead. Therefore, workers must be made to realize the seriousness of non-approved procedures and their consequences.

B. During the course of the LCM removal or other related work, if workers or other tradespeople encounter and/or disturb existing lead-containing components, then appropriate safety and worker protection measures will be taken to ensure protection from potential lead exposure. These safety measures shall include those procedures contained herein, as applicable, and any additional controls not originally necessary. Safety measures shall be in accordance with all federal, state, and local regulations. Complete, and coordinate with Owner as applicable, all communication of hazards in strict accordance with 29 CFR 1926 and other applicable State and federal regulations for lead, asbestos, PCB, mercury, fluorescent light bulbs, and other anticipated hazards. The Contractor shall coordinate with the Owner and the IH Consultant to review all existing inspection records and testing results as needed.

1.7 CONTRACTOR USE OF PREMISES

A. General: The Contractor shall limit his use of the site to the work indicated, so as to allow for Owner operations and general construction activity. Confine operations at the site to the specified

work areas of the Specification. Take all precautions necessary to protect the site, buildings, any occupants, and surrounding areas from work-related hazards during the construction period. Maintain building in a safe and structurally sound condition throughout the work. Maintain access to the public and other trades in designated areas (for example, stairwells) as indicated herein and as otherwise noted by Owner. Provide additional barriers and site security as needed to accommodate such access. Use care to prevent damage to existing surfaces during installation of solid barriers, critical barriers, and primary isolation barriers.

B. Install solid barriers to prevent unauthorized access and visibility from adjacent, public, or Owner-occupied areas as designated by Owner and using materials and construction methods approved by Owner.

1.8 STOP WORK

A. The Contractor's Site Supervisor shall stop work and shall not proceed until corrective measures are implemented in the event that any of the below occur:

1. Failure to work in accordance with state and federal regulations or this plan.
2. Area monitoring results that exceed the contaminant specific OSHA Action Level for Lead of 30 $\mu g/m^3$.
3. Personnel exposure monitoring results that exceed the OSHA eight (8) hour time-weighted average (TWA) of 50.0 ug/m^3 of air for Lead.
4. Other potential safety, health and environmental emergencies, and changes in conditions of the work as required.

B. Complete all corrective work with no change in the Contract Price if elevated airborne lead concentrations or other conditions resulting in stop work were caused by Contractor activities or compliance deficiencies.

1.9 PROJECT COORDINATION

A. Site Supervisor: Provide a full-time Site Supervisor who is experienced in administration and supervision of lead paint removal projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Contractor's Representative responsible for compliance with the specification and all applicable federal, state, and local regulations.

1. Experience and Training: The Site Supervisor must have completed a course at an EPA Training Center or equivalent certificate course in lead abatement procedures and have had a minimum of five (5) years on-the-job training in similar lead paint abatement procedures.

2. Accreditation/Qualifications: The Site Supervisor is to be (1) a Competent Person as required by OSHA in 29 CFR 1926.62

B. Project Manager: Provide a qualified and experienced project manager to perform administrative and project management responsibilities and to serve as Contractor management point of contact in addition to the project supervisor.

C. Pre-Construction Conference: An initial progress meeting, recognized as "Pre-Construction Conference" shall be convened by Owner with Contractor prior to the start of work for each phase.

This meeting shall be held to review the scope of work, scheduling, coordination, and contractor plan of action and submittals and other applicable items.

D. Daily Log: Maintain at the work area a daily log documenting the dates and time of but not limited to, the following items:

1. Visitations; authorized and unauthorized
2. Daily sign-in sheet for all personnel entering and leaving the work area (name, certification, expirations).
3. Special or unusual events, i.e., barrier breaching, equipment failures, accidents
4. Documentation of the following:

a) Supervisor’s daily inspections and exposure monitoring test results.
b) Work progress each day for each work area.
c) Removal of waste material (number and type of containers) from each work area.
d) Removal of waste from site including a copy of the accompanying waste shipment record.
e) Decontamination of work area and equipment.
f) Final inspection and air clearance results; and
g) Documentation of containment removal and final general housecleaning activity.

5. Complete and maintain a daily log in accordance with applicable State and federal record keeping requirements. Provide access to logs to the Owner and IH Consultant at all times and provide copies of logs with the submittal package in accordance with the construction submittal requirements.

1.10 STANDARDS

A. Applicability of Standards: It is the Contractor's responsibility to complete all work in accordance with (or exceeding) all applicable industry standards and guidelines. Except where Contract Documents include more stringent requirements, all applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Applicable construction standards are made a part of the Contract Documents by reference. Where compliance with an industry standard is required, comply with the most current standards in effect as of date of Contract Documents.

B. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement shall be enforced, unless the Contract Documents indicate otherwise. Refer to the Owner and IH Consultant any requirements that are different or conflicting; outline the more stringent requirement before proceeding.

C. Comply with applicable standards including, but not limited to, American National Standards Institute (ANSI) standards and American Society for Testing and Materials (ASTM) standards.

1.11 CODES, REGULATIONS, AND STANDARDS

A. Adhere to work practices and procedures set forth in applicable codes, regulations and standards related to work. Obtain permits, licenses, inspections, and similar documentation, as well as payments and similar requirements associated with codes, regulations, and standards. Update permits, as necessary.

B. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold Owner, Owner's Project Management Consultant, and IH Consultant harmless for failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on the part of himself, his employees, or his subcontractors.

C. All work performed under this contract shall comply with applicable provisions, including most current versions, and not limited to the listed and all other applicable local, state, and federal codes and regulations.

D. Federal Requirements: which govern lead paint related work or hauling, and disposal of lead waste materials include but are not limited to the following:

1. Code of Federal Regulations

    i. 29 CFR 1910, "Occupational Safety and Health Standards" (General Industry Standards)

    ii. 29 CFR 1910.20, "Access to Employee Exposure and Medical Records"

    iii. 29 CFR 1910.134, "Respiratory Protection"

    iv. 29 CFR 1926.59, "Hazard Communication"

    v. 29 CFR 1926, "Safety and Health Regulations for Construction" (Construction Industry Standards)

    vi. 29 CFR 1926.62 "Lead-Construction"

    vii. 40 CFR 117, "Determination of Reportable Quantities for Hazardous Substances"

    viii. 40 CFR 122, "EPA Administered Permit Program: The National Pollutant Discharge Elimination System"

    ix. 40 CFR 172, "Hazardous Waste Transportation"

    x. 40 CFR 261, "Identification and Listing of Hazardous Waste"

    xi. 40 CFR 262, "Standards Applicable to Generators of Hazardous Waste"

    xii. 40 CFR 263, "Standards Applicable to Transporters of Hazardous Waste"

    xiii. 40 CFR 268, "Land Disposal Restrictions"

    xiv. 40 CFR Part 745, EPA Lead Renovation, Repair and Painting (RRP) Rule

2. Occupational Safety and Health Administration OSHA Booklet 3126 "Working with Lead in the Construction Industry."

3. National Institute for Occupational Health and Safety

i. NIOSH Method 7082, "Lead"

F. Maine Department of Environmental Protection: which govern lead paint related work or hauling, and disposal of lead waste materials include but are not limited to the following:

1. Chapter 424 Lead Management Regulations

1.12 DEFINITIONS

A. General Definitions: Definitions contained in this Section are not necessarily complete but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

1. Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's representative", "requested by the "IH Consultant", and similar phrases. However, no implied meaning shall be interpreted to extend the IH Consultant's responsibility into the Contractor's area of construction supervision.

2. Approve: The term "approved," where used in conjunction with the Owner, Owner’s Project Management Consultant, or the IH Consultant's action on the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the IH Consultant as indicated in the Contract Documents. Such approval or acceptances do not express or claim any certification of completeness, compliance, or approval of programs and documentation, including but not limited to review of analytical results, historical information, and interpretations. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

3. Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

4. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."

5. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

6. Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor, or sub- subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged in performing.

7. IH Consultant: This is the entity employed or engaged as industrial hygiene consultant as described in the Contract Documents. All references to Owner's Consultant, Air Monitoring Consultant, or Consultant with regard to lead paint related work in the Contract Documents in all cases refer to the IH Consultant. The IH Consultant shall represent Owner during work and until final payment is due. The Owner representative may also constitute other people representing Owner, other than the IH Consultant or consultant, as indicated by Owner. Owner's instructions to the Contractor shall be made directly to the Contractor or forwarded through the IH Consultant.

8. Site Supervisor: This is the Contractor's Representative at the work site. This person shall be the Competent Person required by OSHA in 29 CFR 1926.62 and licensed Site Supervisor/Foreman as required by the State. Provide licensed supervisor at each individual work site during work.

B. Definitions – Lead related:

1. The term “Lead-Based Paint” (LBP) is identified as paint or other surface coating such as varnish, sealer or stain containing lead in any detectable amount.

2. The term "Incidental Removal or Disturbance of Lead-Based Paint" indicates one or more of the following operations:

3. Scraping, hand sanding, or otherwise removing loose LBP from existing surfaces scheduled to remain in place.

4. The term “Demolition of LCM” refers to cutting, drilling, abrading, demolishing, or otherwise disturbing building elements coated with LBP or containing lead.

5. The term “Lead-Containing Materials” (LCM) is identified as construction debris coated with lead-based paint or other materials containing lead, such as x-ray shielding.

6. The term "Critical Barrier" indicates the perimeter of the enclosure within which lead disruption/removal work takes place. Critical Barriers may include existing floor, wall, and ceiling structures, as well as constructed partitions, closures, and seals.

7. The term "Project Site" indicates the limits of the Project Site as indicated on drawings or by provisions of this specification.

8. The term "Work Area" indicates the area within the Critical Barrier.

9. The term “Action Level” means exposure to an airborne concentration of lead of 30 micrograms per cubic meter of air calculated as an 8-hour time-weighted average (TWA).

10. The term “Exposure Assessment” means a determination of employee exposures for a given task measured by air monitoring. The Assessment must meet the criteria for objective data as outlined in the OSHA Lead in Construction Standard (29 CFR 1926.62).

11. The term “OSHA PEL” stands for the Permissible Exposure Limit established by the Occupational Safety and Health Administration for lead exposure. The OSHA PEL refers to an airborne concentration of lead of 50 micrograms per cubic meter of air calculated as an 8-hour time-weighted average (TWA).

12. The abbreviation “TCLP” stands for Toxicity Characteristic Leaching Procedure and refers to one of the tests to determine if waste is considered a Hazardous Waste or non-hazardous solid waste.

13. The term “Hazardous Waste” refers to a listed waste or any solid or liquid waste with one or more of the following characteristics: toxic, corrosive, flammable, explosive, combustible, oxidizer, pyrophoric, unstable (reactive) or water - reactive.

14. The term “Non-Hazardous Waste” refers to any solid or liquid waste not exhibiting characteristics of Hazardous Waste.

1.13 SUBMITTAL REQUIREMENTS

A. Submittal Schedule: The Contractor shall provide submittals as specified herein including (1) Preconstruction Submittal Documentation prior to start of work and (2) Project Closeout Submittals within 25 days upon completion of on-site work. Submit ongoing submittals as required herein and as specified by the Owner and IH Consultant. Provide at the job site a copy of all current submittal packages and related documentation. Ongoing submittals shall also be submitted during the work as required to update the Pre-construction and Closeout submittals including, but not limited to:

B. Exposure Assessment Documentation

C. All information used to document previous employee exposure assessments, if available. If not available, conduct an initial exposure assessment at the start of the project.

D. Written Compliance Plan: Submit a Written Compliance Plan incorporating all requirements in the OSHA Lead in Construction Standard. Also indicate type of containment and method of liquid waste capture to be established if water is utilized for removal.

E. Health and Safety Requirements: Submit to OWNER the following information for each employee that will conduct lead disturbance on the job site:

1. Respiratory Protection Program.

2. Proof of current fit test for respirator that will be worn on Project Site.

3. Proof of medical surveillance for respirator usage and lead work.

F. Proof of lead awareness training

G. Prepare a written schedule for each operation expected to disturb/remove LCM, indicating the following:

1. Type of work to be performed, such as cutting, demolition, paint removal, or other action.

2. Location of work to be performed.

3. Proposed starting date and time.

4. Proposed working hours.

5. Proposed duration.

1.14 TEMPORARY FACILITIES

A. General: Provide temporary connection to existing building utilities or provide temporary facilities as required to complete work. The owner must approve all connections to utilities and facility

components. Provide temporary portable water and power sources for all exterior work as indicated and coordinated with Owner, as applicable.

B. Water Service:

1. Temporary Water Service Connection: Provide hot and cold water to the Work Area. Provide a qualified and experienced licensed plumber as necessary to complete all water service work in conformance with applicable building codes and regulations.

2. All connections to the Owner's water system shall include back-flow protection. Monitor for leaks and repair or replace as needed.

3. Water Hoses: Employ suitable heavy-duty abrasion-resistant hoses to provide water into each work area and to each Decontamination Unit.

C. Electrical Service:

1. General: Provide a qualified and experienced licensed electrician to complete all electrical service work. Comply with applicable OSHA, NEMA, NECA, UL and other industry standards and governing regulations for materials and layout of temporary electric service. Provide adequate temporary power to the Work Area sized and equipped to accommodate all electrical equipment required for completion of the work and related testing and inspections. Provide temporary electrical panels as needed sized and equipped to accommodate all electrical equipment and lighting required by the work. Connect temporary panel to existing building electrical system. Protect with circuit breaker or fused disconnect. Locate temporary panel outside of the work area and in a location acceptable to Owner. Equip all circuits for any purpose entering the Work Area with ground fault circuit interrupters (GFCI).

2. Lamps and Light Fixtures: Provide appropriate temporary work area lighting. Protect lamps with guard cages or tempered glass enclosures where fixtures are exposed to breakage by construction operations.

D. First Aid: Comply with governing regulations and recognized recommendations within the construction industry. Provide appropriate first aid supplies.

E. Fire Extinguishers: Provide appropriate fire extinguishers for temporary offices, storage, work areas and other portions of the site occupied or used by the Contractor for the work.

F. Execution: Use qualified tradesmen for installation of temporary services and facilities. Locate temporary services and facilities where they shall serve the entire project adequately and result in minimum interference with the performance of the Work. Coordinate all such work with Owner. Require that tradesmen be licensed as required by local authorities. Relocate, modify, and extend services and facilities as required during the course of work so as to accommodate the entire work of the project.

PART 2 – PRODUCTS (NO APPLICABLE)

PART 3 – EXECUTION

3.1 HEALTH AND SAFETY REQUIREMENTS

A. General: Determine employee exposure to lead in air as required in OSHA Lead in Construction Standard.

B. Exposure Assessment: If the Contractor has made a previous Exposure Assessment that is representative of the task to be performed on-site, the Contractor may rely on this data and determine the need for personal protective equipment and work practice controls based upon this data, if approved by OWNER.

C. Job requirements: When the Contractor does not have an Exposure Assessment or the Assessment is determined to be insufficient, the Contractor must conduct personal air monitoring in accordance with the OSHA Lead in Construction Standard and follow the requirements below which are outlined by job task until monitoring determines otherwise:

1. Manual demolition, scraping, sanding, heat gun application, power tool cleaning with HEPA dust collection system, spray painting with LCM:

i. Use of 1/2 mask respirator with HEPA filters.

ii. PPE.

iii. Medical surveillance.

iv. Use of changing room.

v. Use of handwashing facilities.

vi. Provision of lead awareness training.

2. Using lead mortar, lead burning, rivet busting, power tool cleaning without HEPA collection, cleaning up with dry expendable abrasives, removing or relocating enclosure:

vii. Loose fitting PAPR with HEPA or supplied air respirator.

viii. PPE.

ix. Medical surveillance.

x. Use of changing room.

xi. Use of handwashing facilities.

xii. Provision of lead awareness training.

3.2 Preparation

A. General: Prepare Work Areas in a manner that will protect Owner's personnel and property, and the visiting public, from contact with LCM. Prior to beginning work, confirm starting date and time with Owner. Do not begin work that will disturb LCM without Owner's approval.

B. Preparing Building Exteriors: Ensure adequate measures are in place to limit airborne lead content below the Action Level of 30 ug/m3 (micrograms per cubic meter) adjacent to the Work Area.

1. Erect barricades and install warning tape or signs as necessary to prevent inadvertent exposure of passersby to LCM in all forms, including, but not necessarily limited to dust, particles, and fumes.

2. Completely cover grounds and vegetation with minimum 6-mil thick polyethylene sheets with joints between sheets lapped and taped; with one edge taped to adjacent building surfaces below area of work; and with free ends secured in position with stakes, tie-down lines, or weights. Cover sufficient ground area to capture wind-blown chips, dust, and particles.

3.3 WORK PRACTICES

A. General: Perform any removal, demolition, or disturbance of LCM in compliance with the following requirements:

1. Restrict access to Work Area to essential personnel.

2. Use moist-removal methods and/or HEPA vacuuming where applicable. Do not oversaturate the Work Area.

3. Any debris generated must be cleaned up immediately before it can be tracked into other areas.

4. Remove contaminated clothing and personal protective equipment before leaving the Work Area, or Work Area enclosure, as applicable.

5. If the Action Level is exceeded outside the Work Area, discontinue work, and modify Critical Barrier, or perform other modifications of methods or materials as required to reduce the lead contamination below the Action Level.

6. Prohibit eating, drinking, and smoking in the Work Area.

3.4 DISPOSAL

A. Lead Painted Demolition Debris and Lead Paint Chips: Prior to removal of waste from the site, coordinate Toxicity Characteristic Leaching Procedure (TCLP) testing of LCM waste with IH Consultant. Allow two weeks for testing results. If TCLP testing shows the waste to be nonhazardous, the waste can be disposed of as normal construction demolition debris. If waste is classified as Hazardous or has not been TCLP tested, comply with the following requirements:

1. Collect and place solid and liquid waste in DOT approved containers.

2. Store waste containers in a secure area (preferably a locked room at the project site). Set containers securely on a hard surface. Do not stage containers on lawns, dirt piles, gravel drives, areas with mud or basement areas with no elevator access.

3. Ensure that soil, ground water, and drains or sewers within the storage area are protected from possible contamination. Keep containers secure and tightly closed at all times, except when adding waste.

4. Keep lead waste segregated from other waste. Do not co-mingle waste. DO NOT MIX LIQUID AND SOLID WASTE.

5. Use an authorized hazardous waste transporter to haul waste to a hazardous waste facility.

6. Follow all record-keeping, chain-of-custody and reporting requirements including a copy of the hazardous waste manifest.

7. Accurately measure and weigh the volume of each container or load of waste removed from the site. Submit records of waste volumes to OWNER and IH CONSULTANT.

8. Special attention shall be given to the time of storage, amount of material stored at any one time, use of proper containers and personnel training.

9. Provide appropriate notifications to regulatory agencies if there is a release to the environment exceeding the CERCLA reporting requirements (e.g., lead –—1 pound).

10. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken.

11. Provide legal transportation of the waste to the disposal landfill, and complete or obtain all required licenses, manifests, landfill slips, or other forms. Copies of all forms or licenses, and the signed original of the Waste Manifest for each waste load, shall be given to the IH CONSULTANT or OWNER.

END OF SECTION 028213

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Wood blocking,shims and nailers.

B. Related Requirements:
   1. Section 085450 Composite Windows

1.3 DEFINITIONS

A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.

B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater size but less than 5 inches nominal (114 mm actual) size in least dimension.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
   1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
   2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
   3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D5664.
   4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:
   1. Power-driven fasteners.

2. Post-installed anchors.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
   1. Factory mark each piece of lumber with grade stamp of grading agency.
   2. Dress lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less, 19 percent for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
   1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat all miscellaneous carpentry unless otherwise indicated, items indicated on Drawings, and the following:

1. Wood nailers, curbs, blocking, and similar members in connection with flashing, vapor barriers, and waterproofing.
2. Wood sills, blocking, and similar concealed members in contact with masonry or concrete.

2.3 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.
   2. Nailers.
   3. Shims.

B. Dimension Lumber Items: Construction or No. 2 or better grade lumber of any of the following species:
   1. Hem-fir (north); NLGA.
   2. Mixed southern pine or southern pine; SPIB.
   3. Spruce-pine-fir; NLGA.
   4. Hem-fir; WCLIB or WWPA.
   5. Northern species; NLGA.

C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

D. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
   1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M or of Type 304 stainless steel.

B. Nails, Brads, and Staples: ASTM F1667.

C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01] or ICC-ES AC193, as appropriate for the substrate.
   1. Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.
   2. Material: Stainless steel with bolts and nuts complying with ASTM F593 and ASTM F594, Alloy Group 1 or 2 (ASTM F738M and ASTM F836M, Grade A1 or A4).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate nailers, blocking,and similar supports to comply with requirements for attaching other construction.

C. Do not splice structural members between supports unless otherwise indicated.

D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
   1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.

E. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
   1. Use inorganic boron for items that are continuously protected from liquid water.
   2. Use copper naphthenate for items not continuously protected from liquid water.

G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

H. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
   2. ICC-ES evaluation report for fastener.

3.2 INSTALLATION OF WOOD BLOCKING AND NAILER

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061053

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SECTION 064600 - WOOD TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Interior standing and running trim.
   2. Wood furring, blocking, shims, unless concealed within other construction before woodwork installation.
   3. Shop priming of wood trim.
   4. Shop finishing of wood trim.

B. Related Requirements:
   1. Section 061000 "Rough Carpentry" for wood furring, blocking, and shims required for installing wood trim and concealed within other construction before wood trim installation.

1.2 ACTION SUBMITTALS

A. Samples for Initial Selection:
   1. Shop-applied opaque finishes.

B. Samples for Verification:
   1. Wood Trim Sample for opaque finish, for each species and cut, finished on one side and one edge.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and fabricator.

1.4 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Build mockups of typical wood trim as shown on Drawings.
   2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver wood trim until operations that could damage wood trim have been completed in installation areas. If wood trim must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.6 FIELD CONDITIONS

A. Environmental Limitations for Interior Work: Do not deliver or install interior wood trim until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Environmental Limitations for Interior Work: Do not deliver or install interior wood trim until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 43 and 70 percent during the remainder of the construction period.

1.7 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that wood trim can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 WOOD TRIM, GENERAL

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of wood trim indicated for construction, finishes, installation, and other requirements.
   1. Provide: labels and certificates from AWI certification program indicating that woodwork, including installation, complies with requirements of grades specified.
   2. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.

2.2 INTERIOR SILL TRIM FOR OPAQUE FINISH

A. Grade: Premium.

B. Species: White Poplar

C. Wood Moisture Content for Interior Materials: 5 to 10 percent.

2.3 EXTERIOR SILL TRIM FOR OPAQUE FINISH

A. Grade: Premium.

B. Species: Cedar

C. Wood Moisture Content for Exterior Materials: 9 to 14 percent.

2.4 WOOD MATERIALS GENERAL

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.
   1. Do not use plain-sawn softwood lumber with exposed, flat surfaces more than 3 inches (75 mm) wide.

2.5 MISCELLANEOUS MATERIALS

A. Exterior Blocking, Shims, and Nailers: Softwood or hardwood lumber**,** pressure-preservative treated, kiln dried to less than 15 percent moisture content.
   1. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC3b.
      a. Kiln dry lumber after treatment to a maximum moisture content of 19 percent.
      b. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
      c. Mark lumber with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee's (ALSC) Board of Review.

B. Interior Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber kiln dried to less than 15 percent moisture content.

C. Nails for Exterior Use: hot-dip galvanized or stainless steel.

D. Screws for Exterior Use: hot-dip galvanized or stainless steel.

E. Provide self-drilling screws for metal-framing supports, as recommended by metal-framing manufacturer.

F. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.

G. Adhesives: Do not use adhesives that contain urea formaldehyde.

H. Adhesives: Use adhesives that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

I. VOC Limits for Installation Adhesives and Sealants: Use products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Wood Glues: 30 g/L.
   2. Multipurpose Construction Adhesives: 70 g/L.
   3. Structural Wood Member Adhesive: 140 g/L.
   4. Architectural Sealants: 250 g/L.

2.6 FABRICATION

A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.

B. Fabricate wood trim to dimensions, profiles, and details indicated. Shape edges to match existing millwork details. Otherwise meet the following requirements:
   1. Edges of Solid-Wood (Lumber) Members: 1/16 inch (1.5 mm) unless otherwise indicated.

C. Back-out or groove backs of flat trim members and kerf backs of other wide, flat members except for members with ends exposed in finished work.

D. Assemble casings in shop except where shipping limitations require field assembly.

E. Assemble moldings in shop to maximum extent possible. Miter corners in shop and prepare for field assembly with bolted fittings designed to pull connections together.

2.7 SHOP PRIMING

A. Wood Trim for Opaque Finish: Shop prime with one coat of wood primer specified in Section 099000 " Painting."

B. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.
   1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim. Apply two coats to surfaces installed in contact with concrete or masonry and to end-grain surfaces.

2.8 SHOP FINISHING

A. General: Finish wood trim at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.

B. General: Refer to Section 099000 " Painting" for field finishing opaque-finished wood trim.

C. General: Drawings indicate items that are required to be shop finished. Finish such items at fabrication shop as specified in this Section. Refer to Section 099000 "Painting".

D. Finish Materials: Use finish materials that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers." Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.
   1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim. Apply two coats to end-grain surfaces.

E. Opaque Finish for Wood Trim:
   1. Grade: Same as item to be finished.

2. Finish: System - water-based latex acrylic.
3. Color: Match existing, field verify.
4. Sheen: Match existing: Flat- 15-30, Satin - 31-45 Semigloss, - 46-60, Gloss - 61-100 gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition wood trim to average prevailing humidity conditions in installation areas.

B. Before installing architectural wood trim, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

A. Grade: Install wood trim to comply with same grade as item to be installed.

B. Assemble wood trim and complete fabrication at Project site to the extent that it was not completed in the shop.

C. Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/16” within 6’-0”.

D. Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Preservative-Treated Wood: Where cut or drilled in field, treat cut ends and drilled holes according to AWPA M4.

F. Anchor wood trim to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork.
1. For shop-finished items, use filler matching finish of items being installed.

G. Touch up finishing work specified in this Section after installation of wood trim. Fill nail holes with matching filler where exposed.
1. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are applied in shop.

H. Refer to Section 099000 "Painting" for final finishing of installed wood trim not indicated to be shop finished.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective wood trim, where possible, to eliminate functional and visual defects; where not possible to repair, replace wood trim. Adjust joinery for uniform appearance.

B. Clean wood trim on exposed and semi exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064600

SECTION 076600 – SELF-ADHEARED FLEXIBLE FLASHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Installation of flexible, self-adhering flashing membrane consisting of, but not limited to, the sealing and flashing of above-grade building areas needing protection against water intrusion. Modified bituminous sheet Flexible Flashing.

B. Related Requirements:
   1. Section 061053 ‘ Miscellaneous Rough Carpentry’
   2. Section 079200 ‘Joint Sealants’
   3. Section 085450 ‘Composite Windows’

1.2 REFERENCES

A. ASTM — American Society for Testing and Materials
   1. D 142-97 Test Methods for Sampling and Testing Bitumen – Saturated Felts and Woven Fabrics for Roofing and Flexible Flashing
   2. D 412-97 Test Methods for Rubber Properties in Tension
   3. D 903-93 Test Methods for Peel or Stripping Strength of Adhesive Bonds
   4. D 3767-96 Practice for rubber – Measurement of Dimensions
   5. E 96-94 Test Methods for Water Vapor Transmission of Materials
   6. E-2112-07 Standard Practice for Installation of Exterior Windows, Doors, and Skylights

B. AAMA – American Architectural Manufacturers Association
   1. IM-TM – Installation Masters Training Manual, June 2000
   2. 711-05 Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Penetration Products 3. AAMA/WDMA 1600/I.S.7 – Voluntary Specifications for Skylights, 2000

1.3 SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, and tested physical and performance properties of Flexible Flashing.
   2. Include manufacturer's written installation instructions for evaluating, preparing, and treating substrate.
   3. Material Safety Data Sheets (MSDS)

1.4 QUALITY ASSURANCE

A. Applicator shall be familiar with flexible, self-adhering flashing products and shall have experience in flexible, self-adhering flashing installation. Flashing shall be installed by skilled workers trained for this type of work with 3 years minimum experience.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Apply Flexible Flashing within the range of ambient and substrate temperatures recommended in writing by Flexible Flashing manufacturer. Do not apply Flexible Flashing to frozen, damp, or wet substrates.
   1. Do not apply Flexible Flashing when snow, rain, fog, or mist is present.

B. Maintain adequate ventilation during preparation and application of Flexible Flashing materials.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in sealed, unopened cartons and containers.

B. Store products with protection from direct weather exposure. Store in original sealed packaging at temperatures between 5°-32°C (40°-90°F), and under moisture-free conditions.

C. Stack preformed material to prevent twisting, bending, or abrasion, and to provide ventilation.

D. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

E. Read and follow instructions from MSDS for proper handling and disposal of materials.

1.7 COORDINATION

A. Coordinate Work under this Section with adjacent existing conditions.

B. Coordinate requirements for concrete formwork to provide suitable substrate for Flexible Flashing and to minimize penetrations through Flexible Flashing.

1.8 WARRANTY

A. Manufacturer's Warranty:
   1. Flexible Flashing Warranty: Manufacturer agrees to furnish replacement flashing material for flashing that does not comply with requirements or that fails to remain watertight within specified warranty period.
      a. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 Manufacturers

A. Including but not limited to Basis of Design:
   1. Berry Plastics: Polyken® and Nashua® Flashing Tapes consist of a butyl rubber adhesive with an outer facing and LDPE (low density polyethylene) release liner. The Polyken® and Nashua® Flashing Tapes provide a flexible and self-adhering strip of flashing membrane. Specific Products:

a. Polyken® 626-35 Foilastic: 2 mil aluminum foil facing, butyl rubber adhesive membrane, LDPE release liner.
b. Polyken® 627-35 Shadowlastic: 6.5 mil LDPE black facing, butyl rubber adhesive membrane, LDPE release liner.
c. Nashua® 626-20 Optiflash: 2 mil aluminum, butyl rubber adhesive
d. Nashua® 627-20 Optiflash: 6 mil LDPE black facing, butyl rubber adhesive
e. Nashua® 697-40 Contour: creped, polyolefin facing, butyl rubber adhesive, coated paper release liner

2. Dupont: Weathermate

2.2 SOURCE LIMITATIONS

A. Flexible Flashing System: Obtain Flexible Flashing materials and accessories from single source from single manufacturer.

2.3 ACCESSORIES FOR FEXIBLE FLASHING

A. Primer: Primer for use with porous substrates. Concrete, masonry, OSB and gypsum-core sheathings should be primed for better flashing adhesion.
1. Basis of Design: Polyken #1027

B. B. Sealant: As specified in Section 07900.
1. Chemical Compatibility: Generally, sealants made with polyurethane, butyl, and silicone elastomers will have chemical compatibility to the facing and adhesive sides of flashing tapes.
2. Manufacturer: Check and confirm with specific sealant manufacturers regarding adhesion of specific sealants and application to flashing tapes and the particular materials selected for fenestration product and the weather-resistant barrier.
3. Adhesion: Absent specific product selection for sealants, use the following general guide for adhesion to facings. Check with sealant manufacturer for specific product information.

PART 3 – EXECUTION

3.1 PREPERATION

A. Inspect and field measure site conditions and substrates prior to field fabricating work.

B. Substrates shall be clean, dry, uniform, and smooth prior to flashing application. Remove protrusions and fill voids at substrates as necessary. Ensure fasteners are flush with surface of sheathing substrates.

C. Allow wet substrates to dry thoroughly. Clean dust and debris from all substrates and surfaces receiving the flashing.

D. Prime porous substrates with primer according to manufacturer’s recommendations. Prime concrete, masonry, and wood blocking.

E. Provide solid continuous backing or substrate filler to support all portions of flexible flashing. Fill joints or gaps in substrate 1/8” or wider

3.2 INSTALLATION

A. General
   1. Manufactured products: Comply with manufacturer's written instructions.
   2. Proceed with installation in conjunction with related weather-resistive barrier and flashing in each area of building envelope construction.
   3. Do not dilute primers or sealants
   4. Keep containers closed except when removing materials from them.

B. Except as otherwise specifically indicated or shown on reviewed shop drawings, conform to drawing details included in manufacturer’s recommendations.

C. Form sections true to shape, accurate in size, square, and free from distortion or defects.

D. Cut flashing strip to length. Form pieces in longest practical lengths. Peel back release liner and discard with small pieces of flashing. Align the flashing strip and press by hand into place. With larger flashing pieces, remove a small part of the release liner at the end of a flashing strip (4 to 6 inches). Then set the exposed flashing against the substrate and press into place. Afterwards, the remaining release liner still attached to the flashing is pulled back between the flashing and substrate. The release liner is peeled away, exposing additional adhesive in 12 to 24 inch long sections working away from the starting point.

E. Fit flashings tight in place. Make corners uniform, surfaces flat and straight in planes, and lines accurate to profiles.

F. Fabricate corners, transitions and terminations with a minimum number of pieces.

G. Lap joints for continuous contact. All seams and splices shall be overlapped 3 inches minimum. Lap joints in direction of moisture drainage, in shingle fashion, unless specifically designated otherwise.

H. Roll all flashings with a hand roller, taking special care at laps, seams, splice areas, and T joints to remove any voids and trapped air according to manufacturer’s recommendations.

I. Do not apply flexible flashings to bridge or cover unsupported voids, gaps, or offset materials.

3.3 POST-INSTALLATION PROTECTION

A. Protect exposed flashings after installation from mechanical damage, falling debris and prolonged direct weather exposure.

B. Inspect for tears, rips, punctures, and other damage. Repair damage to flashings prior to covering flashings. Repair damage according to manufacturer’s recommendations.

C. Apply exterior finish coverings over flashings in the proper construction sequence as soon as practical.

END OF SECTION 07660

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
   1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
      a. Joints between new window units and existing masonry.
      b. Joints between new window units and interior wood trim
      c. Joints between new window units and components.
      d. Joints between different materials listed above.
      e. Other joints as indicated.

B. Related Sections include the following:
   1. Section 085450 ‘Composite Windows’.

1.2 PERFORMANCE REQUIREMENTS

A. Provide joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Qualification Data: For Installer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in materials, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, shelf/pot life, curing time, and mixing instructions for multi-component materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

C. Remove and replace materials, at no cost to Owner that cannot be applied within their stated shelf life.

1.6 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
   1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
   2. When joint substrates are wet.
   3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
   4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.7 SEQUENCING AND SCHEDULING

A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation to ensure a weathertight installation.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to South Coast Air Quality Management district (SCAQMD) Rule 1168 as amended January 7, 2005:
   1. Architectural Sealants: 250 g/L.
   2. Sealant Primers for Nonporous Substrates: 250 g/L.
   3. Sealant Primers for Porous Substrates: 775 g/L.

C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

E. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 JOINT SEALANTS

A. Type 1 - General Purpose Exterior Sealant: Polyurethane; ASTM C920, Type S, Grade NS, Class 25; single component.
1. Sonolastic NP-1; Sonneborn, Division of ChemRex Inc.
2. Dymonic; Tremco.
3. Sikaflex-1a; Sika Corporation, Inc.
4. Dynatrol 1; Pecora Corporation.
5. Vulkem 116; Tremco.
6. Chem-Calk 900; Bostik Findley.

B. Type 2 - General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
1. Tremflex 834; Tremco.
2. AC-20; Pecora Corporation.
3. Chem-Calk 600; Bostik Findley.
4. Vulkem 45; Tremco.
5. Chem-Calk 950; Bostik Findley.

2.3 JOINT-SEALANT BACKING

A. General: Provide sealant backings (backer rods) of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers (Backer Rods): Preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, nonoutgassing in unruptured state.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
   3. Remove laitance and form-release agents from concrete.
   4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates, where indicated or recommended in writing by joint-sealant manufacturer, based on prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Installation of Sealant Backings (Backer Rods): Install sealant backings to comply with the following requirements:
   1. Install sealant backings of type indicated to provide support of sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
      a. Do not leave gaps between ends of sealant backings.
      b. Do not stretch, twist, puncture, or tear sealant backings.
   2. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and joint fillers or backs of joints.

D. Installation of Sealants: Install sealants using proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Joints between Exterior Metal Frames and Adjacent Work : Type 1; colors as selected.

B. Exterior Joints for Which No Other Sealant Type is Indicated: Type 1; colors as selected.

C. Concealed Interior Perimeter Joints of Exterior Openings: Type 2; colors as selected.

D. Exposed Interior Perimeter Joints of Exterior Openings: Type 2; colors as selected.

E. Interior Joints for Which No Other Sealant is Indicated: Type 2; colors as selected.

END OF SECTION 079200

SECTION 085214 - METAL CLAD WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Metal Clad windows.

B. Related Requirements:
   1. Section 013300 ‘Submittal Procedures’
   2. Section 017700 ‘Closeout Procedures’
   3. Section 061053 ‘Miscellaneous Rough Carpentry’
   4. Section 064600 ‘Wood Trim’
   5. Section 079200 ‘Joint Sealants’
   6. Section 09 90 00 ‘Painting’

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.
   1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   2. Review, discuss, and coordinate the interrelationship of Metal Clad windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
   3. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
   4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

1.3 REFERENCES

A. American Society for Testing Materials (ASTM):
   1. E283: Standard Test method for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors
   2. E330: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Door by Uniform Static Air Pressure Difference
   3. E547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential
   4. E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights
   5. E2190: Specification for Sealed Insulated Glass Units
   6. C1036: Standard Specification for Flat Glass
   7. E2068: Standard Test Method for Determination of Operating Force of Sliding Windows and Doors
   8. E 1996: Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes

9. E 1886: Standard Test method for Performance of Exterior Windows, curtain Walls, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
10. F 2090-17: Standard Specifications for Windows Fall Prevention Devices with Emergency Escape (egress) Release Mechanisms

B. American Architectural Manufacturer's Association/Window and Door Manufacturer's Association (AAMA/WDMA/CSA):
1. AAMA/WDMA/CSA 101/I.S.2/A440-08, Standard/Specification for windows, doors and skylights
2. AAMA/WDMA/CSA 101/I.S.2/A440-11, Standard/Specification for windows, doors and skylights
3. AAMA 450-10, Voluntary Performance Rating Method for Mulled Fenestration Assemblies

C. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork

D. Window and Door Manufacturer's Association (WDMA): 101/I.S.2 WDMA Hallmark Certification Program

E. Sealed Insulating Glass Manufacturer's Association/Insulating Glass Certification Council (SIGMA/IGCC)

F. American Architectural Manufacturer's Association (AAMA): 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels

G. National Fenestration Rating Council (NFRC):
1. 101: Procedure for Determining Fenestration Product thermal Properties
2. 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence

H. Window Covering Manufacturer's Association
1. A100.1: American National Standard for Safety of Corded Window Coverings Products

1.4 ACTION SUBMITTALS

A. Product Data: Metal Clad windows.
1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes.
2. Product Data: Submit production data for certified options under provision of Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).

B. Shop Drawings:
1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.

C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.

D. Metal Clad Product Schedule: For Metal Clad windows. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Metal Clad Metal Clad Sample Warranties: For Metal Clad windows.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An installer acceptable to manufacturer of Metal Clad windows for installation of units required for this Project.

1.7 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace Metal Clad windows that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures, including excessive deflection, water leakage, and air infiltration.
      b. Faulty operation of moveable sash and hardware.
      c. Deterioration of materials and finishes beyond normal weathering.
      d. Failure of insulating glass units.
   2. Metal Clad Warranty Period:
      a. Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.
      b. Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade and loss of adhesion (peel) per the American Architectural Manufacturer’s Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) years from the original date of purchase.
      c. Factory-applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.
      d. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:

1. Metal Clad Minimum Performance Class: LC.
2. Minimum Performance Grade: 30.

C. Thermal Transmittance: NFRC 100 maximum whole-window U-factor as indicated on the Drawings.

D. Solar Heat-Gain Coefficient (SHGC): NFRC 200 whole-window SHGC as indicated on the Drawings.

2.2 METAL CLAD WINDOWS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
1. Marvin. Ultimate G2 Series

B. Source Limitations: Obtain Metal Clad windows from single manufacturer.

C. Operating Types:
1. Double Hung: With manufacturer's standard sight lines for bottom and top sash.
2. Fixed.

D. Frame Description:
1. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
2. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
3. Water repellant, preservative treated in accordance with ANSI/WDMA I.S.4.
4. Frame exterior aluminum clad with 0.050” (1.3mm) thick extruded aluminum
5. Frame thickness: 11/16” (17mm) head and jambs
6. Frame depth: Frame depth had an overall 5 21/32” jamb (144mm). 4 9/16” (116mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction.
7. Sill assembly including the sill liner: 2 7/32” (56mm)

E. Sash Description:
1. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
   a. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
   b. Water repellant preservative treated with accordance with WDMA I.S.4.
2. Sash exterior aluminum clad with 0.050” (1.3mm) thick extruded aluminum
3. Sash thickness: 1 3/4” (44mm). Corner slot and tenoned.

4. Operable sash tilt to interior for cleaning or removal
5. Sash Options:
    a. Standard: Equal Sash
6. Exterior Cope Profile: Putty
7. Interior Sash Sticking
    a. Standard: Ogee

F. Exterior Finish: Aluminum clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.
1. Color to be selected by Architect from Manufacturer’s full range of Standard Finishes

G. Interior Finish:
1. Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.
2. Painted Interior Finish. Factory-applied water-borne acrylic enamel.
3. Color: Manufacturer’s Standard white

H. Attachment Flange: Manufacturer's standard for replacement windows..

I. Insulating-Glass Units: ASTM E2190.
1. Glass: ASTM C1036, Type 1, Class 1, q3.
    a. Tint: Clear.
2. Lites: As shown on Drawings
3. Filling: Fill space between glass lites with argon.
4. Low-E Coating: Pyrolytic or sputtered on second surface. Low E1
5. Film Pattern: None.
6. Glass-Spacer Color: Manufacturer's standard color.
7. Dirt-Resistant Coating: Exterior coating that reduces surface friction to enhance water runoff and reduce water spots and dirt residue.

J. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

K. Dividers: Grilles permanently attached to exterior and interior of insulating-glass unit with spacer between lites matching color of insulating-glass spacer.
1. Profile: As indicated on Drawings.
2. Width: As indicated on Drawings.
3. Pattern: As indicated on Drawings.
4. Exterior Color: Matching window exterior.
5. Interior Color: Matching window interior.

L. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, or carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock Metal Clad windows, and sized to accommodate sash weight and dimensions.
1. Exposed Hardware Color and Finish: As indicated on Drawings.

M. Double-Hung Window Hardware:
1. Counterbalancing Mechanism: Complying with AAMA 902, concealed, of size and capacity to hold sash stationary at any open position.

2. Locks and Latches: Self-latching, polycarbonate with integral color that allow unobstructed movement of the operable sash across fixed sash and operated from the inside only.
    a. Material: Polycarbonate with integral color.
3. Lift: Manufacturer's standard.

N. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
1. Operating units:
    a. Jambs: Foam-filled bulb
    b. Header: Continuous dual leaf
    c. Bottom rail and check rail: Hollow bulb
2. Stationary units:
    a. Jambs: Foam for picture units; foam-filled bulb for transom unit
    b. Header and bottom rail: Hollow bulb

O. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

P. Accessories:
1. Brick Mould.
    a. Profile as indicated on the Drawings.
    b. Finish to match exterior.

2. Exterior sill extender trim.
    a. Profile as indicated on the Drawings.
    b. Finish to match exterior.
3. Sash opening limiters.
    a. Manufacturers standard for both top and bottom sashes
    b. 4" max opening
    c. Provide the Owner with (3) sets of the limiter override maintenance tools.

Q. Mullions: Provide manufacturer's standard clad mullion system configured to be structurally sound.

R. Insect Screens: Provide screens for each operable sash. Wickets are not permitted.
1. Type and Location: Full, outside sashes.
2. Frames: Roll-formed or extruded-aluminum alloy complying with requirements in SMA 1201; fabricated with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC splines/anchors concealing edge of frames and securing screen material.
    a. Finish and Color: Manufacturer's standard baked-on coating in color matching window exterior.
3. Aluminum Wire Fabric: Manufacturer's standard mesh of coated aluminum wire.

2.3 FABRICATION OF METAL CLAD WINDOWS

A. Fabricate Metal Clad windows in sizes indicated. Include a complete system for installing and anchoring windows.

B. Glaze Metal Clad windows in the factory.

C. Weather strip each operable sash to provide weathertight installation.

D. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Verify rough-opening dimensions, levelness of sill plate, and operational clearance.

C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF METAL CLAD WINDOWS

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.

B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants.

D. Install accessory items as required.

E. Use finish nails to apply wood trim and mouldings.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Tests and Inspections:
   1. Testing Methodology: Testing of windows for air infiltration and water resistance is to be performed in accordance with AAMA 502.
   2. Air-Infiltration Testing:
      a. Test Pressure: Pressure required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance class indicated.
      b. Allowable Air-Leakage Rate: 1.5 times the applicable AAMA/WDMA/CSA 101/I.S.2/A440 rate for product type and performance class rounded down to one decimal place.
   3. Water-Resistance Testing:
      a. Test Pressure: Two-thirds times test pressure required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance grade indicated.
      b. Allowable Water Infiltration: No water penetration.
   4. Testing Extent: Three windows of each type as selected by Architect and a qualified testing and inspecting agency. Windows are to be tested after perimeter sealants have cured.
   5. Metal Clad windows will be considered defective if they do not pass tests and inspections.

C. Prepare test reports in accordance with AAMA 502.

3.4 ADJUSTING

A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.

3.5 CLEANING

A. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
   1. Keep protective films and coverings in place until final cleaning.

3.6 PROTECTION

A. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately in accordance with manufacturer's written instructions.

B. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 085450

SECTION 099000 - PAINTING (MPI STANDARDS)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Surface preparation and application of paint systems on interior and exterior substrates:
      a. Wood.

B. Related Requirements:
   1. Section 064600 ‘Wood Trim’.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

C. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.

D. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.

F. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include preparation requirements and application instructions.
   2. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
   3. Indicate VOC content.

B. Samples: For each type of topcoat product.

C. Samples for Initial Selection: For each type of topcoat product.

D. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
   1. Submit Samples on rigid backing, 8 inches (200 mm) square.
   2. Apply coats on Samples in steps to show each coat required for system.
   3. Label each coat of each Sample.
   4. Label each Sample for location and application area.

E. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in the Exterior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
   1. Maintain containers in clean condition, free of foreign materials and residue.
   2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Benjamin Moore & Co.
   2. Valspar; a brand of The Sherwin-Williams Company.
   3. Sherwin-Williams Company (The).

B. Source Limitations: Obtain paint from single source from single manufacturer.

2.2 PAINT PRODUCTS

A. MPI Standards: Provide products complying with MPI standards indicated and listed in its "MPI Approved Products List."

B. Material Compatibility:
   1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As selected by Architect from manufacturer's full range.

D. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, the following VOC limits.
   1. Flat Paints and Coatings: 50 g/L.
   2. Nonflat Paints and Coatings: 150 g/L.
   3. Primers, Sealers, and Undercoaters: 200 g/L.

E. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' “Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers”.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
   1. Wood: 15 percent.
   2. Portland Cement Plaster: 12 percent.
   3. Gypsum Board: 12 percent.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.

D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.
   1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
   1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Wood Substrates:
   1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
   2. Sand surfaces that will be exposed to view, and remove sanding dust.
   3. Prime edges, ends, faces, undersides, and backsides of wood.
   4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 INSTALLATION

A. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."
   1. Use applicators and techniques suited for paint and substrate indicated.
   2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
   3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
   4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
   5. Primers specified in the Painting Schedule may be omitted on items that are factory primed or factory finished if compatible with intermediate and topcoat coatings and acceptable to intermediate and topcoat paint manufacturers.

B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
   1. Contractor shall touch up and restore painted surfaces damaged by testing.
   2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written instructions, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
   1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
   2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
   3. Allow empty paint cans to dry before disposal.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 PAINTING SCHEDULE

A. Exterior Wood Substrates: Wood Sill.
   1. Latex over Latex Primer System MPI EXT 6.3L:
      a. Prime Coat: Primer, latex for exterior wood, MPI #6.
      b. Intermediate Coat: Latex, exterior, matching topcoat.
      c. Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11.
         1) Match existing exterior trim color.

B. Interior Wood Substrates: Wood Sill.
   1. Latex System:
      a. Prime Coat: Primer, latex, for interior wood, MPI #3.
      b. Intermediate Coat: Latex, interior, matching topcoat.
      c. Topcoat: Latex, interior, semi-gloss, (Gloss Level 5), MPI #54.
         1) Match color of new window sash

C. Interior Gypsum Board and Plaster Substrates:
   1. Latex over Latex Sealer System:

a. Prime Coat: Interior latex primer sealer. MPI# 50
b. Intermediate Coat: Matching topcoat. MPI# 53
c. Topcoat: Interior, latex, match existing finish. MPI# 53

2. Latex over Alkyd Primer System (for Plaster Only):
   a. Prime Coat: Interior alkyd primer sealer.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Interior, latex, match existing finish.

END OF SECTION 099000

October 19, 2022

William Gatchell, AIA
Associate, Senior Architect
Harriman Architects
33 Jewell Ct # 101
Portsmouth NH 03801

Re: Dorothea Dix Psychiatric Center (DDPC)
Bangor, ME
Building Survey Findings
RPF File No. 22.1049

Dear Mr. Gatchell:

During the period of June 15, 2022, through September 15, 2022, RPF Environmental, Inc. (RPF) conducted a hazardous building material survey at the Dorothea Dix Psychiatric Center (DDPC) Facility located at 656 State Street in Bangor, Maine. The survey was performed in five (5) buildings as part of the Facility Condition Assessment being conducted by Harriman Architects. The survey was performed in the designated buildings for accessible hazardous building material as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

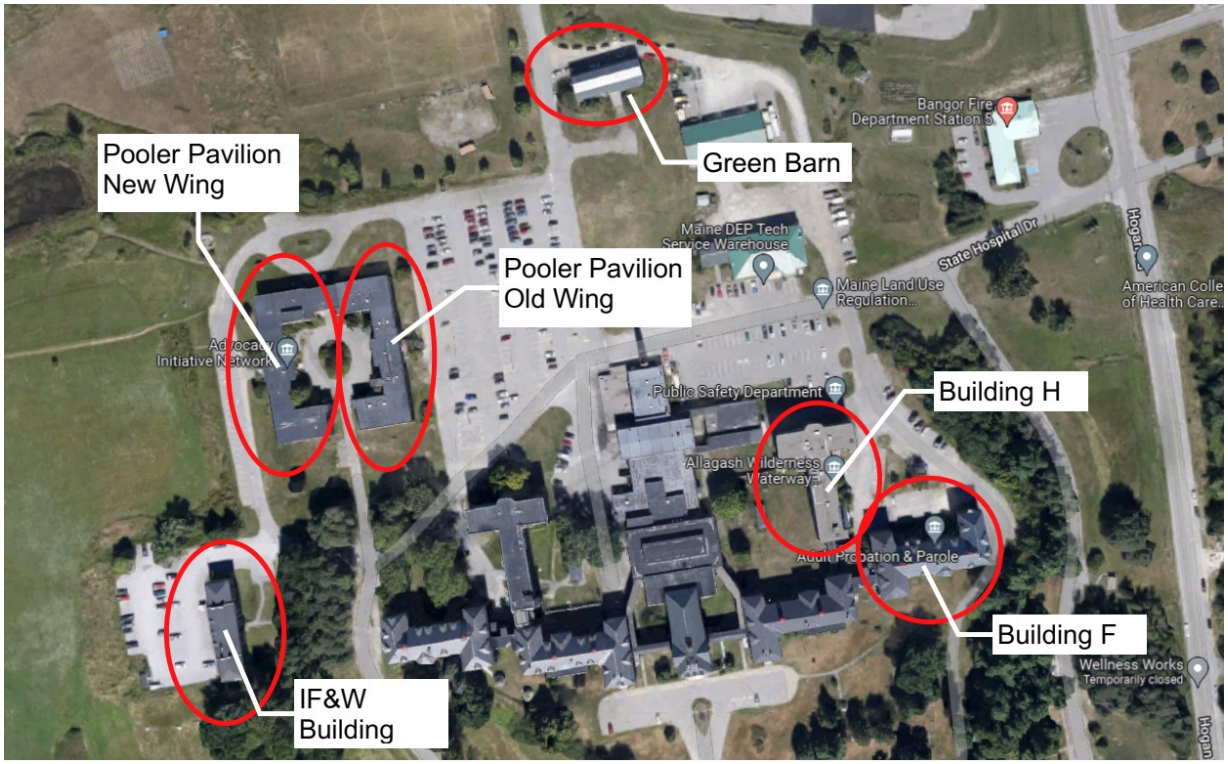
1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer. As part of the design, additional site testing and analysis may be required as discussed in this report.

2. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.

3. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.

Summary of Findings

The scope of services for this survey included the Green Barn, Building F, Building H, the IF&W Building, and Pooler Pavilion, both new and old wings, as shown in the following Figure 1:



The scope of the survey included asbestos-containing building material (ACBM) in accordance with the asbestos inspection requirements prior to renovation or demolition work as stated in Maine Department of Environmental Protection Chapter 425 Asbestos Management Regulations and U.S. Environmental Protection Agency's National Emissions Standards for Hazardous Air Pollutants (NESHAP), Title 40 CFR Part 61. Survey work also included screening for lead paint (LP), and inventories for universal and potentially regulated materials and components.

The scope of RPF services for this survey did not include any sampling of roofs or access into any potential tunnels that may exist beneath or between the buildings. RPF was also limited to accessible areas of each building. While this did not pose any problem with most of the buildings, as RPF was provided with effectively unrestricted access, the 3rd floor of Building F was largely inaccessible to RPF as it was occupied at the time of the survey.

Asbestos

Several types of suspect asbestos-containing building material (ACBM) were observed by RPF in each building, including friable and nonfriable suspect material. Based on the testing performed by RPF asbestos was detected in the following materials:

SUMMARY OF ACBM IDENTIFIED	
Building F	Sheet Flooring
Building H	Pipe and Fitting Insulation Sink Basin Undercoat

SUMMARY OF ACBM IDENTIFIED	
Green Barn	Caulk
IF&W Building	Transite Panels
Pooler Pavilion (new wing)	Pipe and Fitting Insulation Exhaust Breeching Switchgear (assumed) Sheet Flooring Sheet Flooring Mastic Window Glaze Floor Tile and Mastic Sink Basin Undercoat Caulk (white) Caulk (black)
Pooler Pavilion (old wing)	Fire Door Insulation Pressboard Pipe and Fitting Insulation Floor Tile and Mastic Caulk Sink Basin Undercoat Sheet Flooring Stair Tread and Mastic

ACBM that was identified was observed to be in conditions ranging from good to damaged, largely depending on whether the building was occupied or not. ACBM observed in Building F and Building H, both of which were currently occupied at the time of the survey, was found to be in good condition while ACBM observed in the Pooler Pavilion, which was unoccupied at the time of the survey and had stood unoccupied for some time, was largely found to be in damaged condition. Regardless of renovation or demolition, some form of abatement will be required in many of these locations.

Lead Paint

Based on the age of each building and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present at each building. RPF conducted limited spot testing of paint coatings and lead was detected on a majority of the surfaces tested. The conditions observed within the Pooler Pavilion, both old and new wings, and the Green Barn were largely of peeling and chipped paint throughout. The painted surfaces observed in Building F, Building H and the IF&W Building were largely in fair to good condition. The intent of the lead testing was for potential lead hazardous waste disposal and construction information purposes only.

Other Potentially Hazardous Building Material

The presence of other hazardous or regulated building materials, including mercury containing fluorescent bulbs, fluorescent light fixture ballasts, batteries, and potential other universal wastes were found within each of the buildings.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation

and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Although limited destructive survey methods were employed within the buildings, inspection of concealed portions of the space were constrained by the need to prevent structural damage and damage to the building envelope. As is the case with any survey of this nature, it is not possible to identify all hidden or concealed suspect material until full demolition occurs.

Discussion of Findings

Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified one hundred seventy-two (172) homogeneous groups of accessible suspect asbestos-containing building material between the six buildings. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACBM.

The following is a summary list of the suspect ACBM identified and sampled during this survey:

Building F

- *Skim Coat, White*
- *Plaster, Gray*
- *Suspended Ceiling Tile, White*
- *Cementitious Flooring, Tan*
- *Mortar with adhesive*
- *Ceramic Tile Grout, White*
- *Blown-in insulation, White*
- *Textured surfacing, White*
- *Grout, Grey*
- *Flue Cement, Grey*
- *Gypsum & Joint Compound*
- *Cementitious panel, Black*
- *Floor paper, Tan*
- *Floor tile, White & Red*
- *Mastic, Black*
- *Cove base adhesive, Tan*
- *Floor tile, Brown*
- *Adhesive, Tan*
- *Carpet adhesive, Tan*
- *Floor tile, Red & White*
- *Mastic, Yellow*
- *Caulking, White*
- *Sink Basin Coating, White*
- *Laminate Countertop, Adhesive, clear*
- *Floor tile, Grey,*
- *Adhesive, Yellow*
- *Floor tile, Grey*
- *Adhesive, Yellow*
- *Flooring material, Yellow + Pink + Blue*
- *Duct Sealant, Grey*
- *Window Glaze, White*
- *Ceramic Tile Adhesive, Brown*
- *Floor tile, Tan*
- *Mastic, Yellow*
- *Sheet Flooring, White*

Building H

- *Plaster finish, White*
- *Plaster base, Gray*
- *Suspended Ceiling Tile, Gray*
- *Gypsum Board and Joint Compound, White*
- *12" Ceiling Tile, Orange*
- *Wall Filler, White*
- *Grout, Wall Tile, White*
- *Ceiling Tile, White 2x2*
- *Fitting on Fiberglass Run, White*
- *Textured Surfacing, White/Gold speckled*
- *Carpet Glue, Yellow*
- *Covebase Adhesive, Yellow*
- *Glaze, White*
- *Glue, Yellow*
- *Sheet Floor Sink Basin Undercoating, Black*
- *Rubberized Tile, Green*
- *Mastic, Green*
- *12" Floor Tile, Green*
- *Mastic, Green*
- *12" Floor Tile, Pink*
- *Mastic, Pink*
- *Glaze, White*

- *Pipe Insulation, Gray*
- *Fitting, White*
- *Sink Basin Undercoating, White*
- *12" Floor Tile, White*
- *Mastic, Yellow*

Green Barn

- *Caulk, White*
- *Window Glaze, Beige*
- *Asphalt-like Siding Paper, Black/Silver*
- *Siding Paper, Black*

IF&W Building

- *Plaster Finish, White*
- *Plaster Base, Grey*
- *Gypsum Board and Joint Compound, White/Grey*
- *Tectum-like Ceiling Tiles, Tan*
- *Grout, Ceramic Wall Tiles, White*
- *Grout, Grey*
- *Fume Hood Transite Panels Lab Counters, Black*
- *Insulation/cement, Grey*
- *Rope Gasket, White*
- *12" Floor Tile, White*
- *Mastic, Yellow*
- *12" Floor Tile, Green*
- *Carpet Glue, Yellow*
- *Stair Tread, Green Glaze, White*
- *Duct Vibration Cloth, Black*
- *12" Floor Tile, Tan*
- *Duct Sealant, Grey*
- *Flooring Mastic, Mixed*
- *Caulk, White*
- *Firestop Caulk, Red*
- *Insulation Compound, Red/Grey*

Pooler Pavilion, New Wing

- *Gypsum Board and Joint Compound, White*
- *Plaster, Skim Coat, White*
- *Plaster, Base Coat, Grey*
- *Ceiling Tiles, Grey*
- *Grout, White*
- *Grout, Grey*
- *Pipe Insulation, White*
- *Exhaust Breeching, White*
- *Breech Elbow Insulation, White*
- *Pipe Insulation, Grey*
- *Cementitious Wall Panel*
- *Sheet Flooring, White*
- *Vinyl Sheet Flooring, White*
- *Mastic, Black*
- *Carpet Adhesive, Yellow*
- *Caulk, Interior Windows, White*
- *Caulk, Interior Seams/Doors, White*
- *Adhesive, Mixed (covebase)*
- *Glaze, White*
- *9" Floor Tile*
- *12" Floor Tile, White*
- *Adhesive, Yellow*
- *Sink Basin Undercoat, Black*
- *Mixed Mastics*
- *Adhesive, White*
- *Sink Basin Undercoat, White*
- *9" Floor Tile, Grey*
- *12" Floor Tile, Brown*
- *12" Floor Tile, Grey/Tan*
- *Caulk, White*
- *Caulk, Black*
- *Mixed Mastics, Yellow/*

Pooler Pavilion, Old Wing

- *Plaster finish, White*
- *Plaster base, Grey*
- *Plaster finish, white*
- *Gypsum Board and Joint Compound, White*
- *Ceiling Tile, Grey*
- *Ceiling Tile, White*
- *Fire Door Insulation, White*
- *Grout, Grey*
- *Grout, White*
- *Gypcrete, Grey*
- *Pressboard, White*
- *Skim Coat, White*
- *Base Coat, Off-White*
- *Mortar, White*
- *Pipe Insulation, White*
- *9" Floor Tile, Maroon*
- *Mastic, Black*
- *12" Floor Tile, White*
- *Mastic, Yellow*
- *12" Floor Tile, Brown*
- *Mastic and Filler, Brown/Black*
- *12" self-stick Floor Tile and Adhesive, White*
- *Carpet glue, Yellow*
- *Covebase adhesive, mixed*
- *Caulk, White*
- *Sink Basin Undercoat, Black*
- *Adhesive, White*
- *Sheet Flooring and Adhesive, White*
- *Sheet Flooring and Adhesive, Tan*
- *12" Floor Tile, Grey*
- *Adhesive, Yellow*
- *Sink Basin Undercoat, White*
- *12" Floor Tile, White with Tan and Blue Flecks*
- *Damp Proof Coating, Black*
- *Stair Tread Floor Tile, Black*
- *Glaze, White*
- *Fire Stop Caulk, Red*

A total of five hundred eighty-four (584) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Table 1 of Appendix A includes a list of ACBM

identified in each building along with EPA category listings, and asbestos content. Listings of the different homogenous groups of suspect material identified, samples collected, and analytical results from each building are included in the subsequent tables in Appendix A.

Some suspect material is assumed to be ACBM as testing of the material was not included in the RPF scope of work or because sampling was not feasible at the time of the survey. For example, roofing was not performed in order not to damage the integrity of the materials at this time. Additionally, there was energized switchgear observed Pooler Pavilion, New Wing that could not be sampled. All assumed ACBM should be handled as ACBM until and unless full testing is performed and the material is found to be non-detect for asbestos.

Suspect materials encountered at the site subsequent to this survey, which are not included on the enclosed listings of suspect material sampled, should be assumed to be ACBM until proper testing proves otherwise (for example prior to any disturbance due to maintenance, renovation, or demolition activity). Please notify RPF in this event to arrange for proper testing and assessments. Please reference the attached methodology and limitations.

Lead Paint Screening

Based on the types and ages of building construction at the site, it is reasonable to assume that various painted surfaces contain lead. It is common in buildings such as this and that have had various renovation and upgrades to have both lead containing paint and non-lead containing paint. Lead is a toxic metal that was used for many years in paint and other products found in and around buildings and homes. Exposure to lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children six years old and under are most at risk; however, adults are also susceptible to the effects of lead over exposure.

For the purposes of this survey, RPF collected paint chip samples of representative paint coatings within each of the buildings surveyed. These paint chip samples were analyzed for lead content by flame atomic absorption (Flame AA) Spectroscopy by EPA method SW-846 3050B/6010C/7000B. The intent of the screening was for potential lead hazardous waste disposal screening purposes and for lead safe work practice considerations during renovation or demolition activity.

Varying concentrations of lead were identified on each building included in this survey. A summary of the testing for each building is provided below with laboratory test results included in Appendix B.

Summary of Lead Paint Identified	
Building F	13 out of 14 paint chip samples collected found to contain lead ranging from **0.014 to 24 percent by weight**
Building H	9 out of 10 paint chip samples collected found to contain lead ranging from **0.014 to 22 percent by weight**
Green Barn	All 4 paint chip samples collected found to contain lead ranging from **0.41 to 12 percent by weight**
IF&W Building	9 out of 10 paint chip samples collected found to contain lead ranging from **0.0045 to 0.65 percent by weight**

Summary of Lead Paint Identified	
Pooler Pavilion (new wing)	5 of 11 paint chip samples collected found to contain lead ranging from **0.013 to 2.8 percent by weight**
Pooler Pavilion (old wing)	10 out of 12 paint chip samples collected found to contain lead ranging from **0.0039 to 7 percent by weight**

The paint coatings observed within the unoccupied buildings (Pooler Pavilion, IF&W, and the Green Barn) were generally observed to be in poor condition with loose and flaking paint on surfaces, paint chip debris on the floors and exterior ground surfaces. The occupied buildings (Building F and Building H) were largely observed to have paint coatings in good to fair condition. It is important to note that not all surfaces in each building were tested.

Based on this limited testing, it should be assumed that other similar painted surfaces at the site not specifically listed on the testing results in this report may also contain lead. Any surfaces or components with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations.

Current State of Maine Child Lead Poisoning regulations consider any paint that contains greater than 0.5 percent by weight to be lead-based paint. However, the intent of this survey was for construction purposes, not for compliance with housing or childhood lead prevention requirements. Additionally, U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, if any level of lead is present, steps must be taken to control and minimize any exposure. Construction and demolition workers impacting LP or other lead material should be trained and protected in accordance with OSHA regulation 29 CFR 1926.62. In the OSHA standard, construction work is defined as work for construction, alteration, and/or repair, including painting and decorating. It includes but is not limited to the following:

- Demolition or salvage of structures (or sections of the existing structure) where lead or
- materials containing lead are present.
- Removal or encapsulation of materials containing lead.
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof that contain lead, or materials containing lead.
- Handlers of salvageable materials and the treatment/disposal facility must also be informed of the material's lead content. All personnel involved must be trained in personal protection and proper work practice procedures in accordance with OSHA regulations.
- If buildings are to be used for housing of children the age of 6 or under or schools, the EPA RRP training requirements may be applicable.

Although not included in the scope of the LP testing, other building materials may also contain lead, such as flashing, cast iron pipes, cable and wire casing, solder (plumbing and electrical); these materials should also be managed and disposed of properly.

All waste contaminated with or containing lead should be disposed of in accordance with all state, local, and federal regulations. As lead was found to be present in the screening, proper waste stream sampling and analysis with the Toxicity Characteristic Leaching Procedure (TCLP) should be completed prior to disposal of any waste generated in accordance with current EPA requirements. Construction/demolition

waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

Please also note that construction and renovation work involving lead paint in housing and child-occupied facilities built before 1978 is also regulated under the EPA Renovation, Repair, and Painting (RRP) rule. Any contractors conducting such work must be properly certified and must use lead safe work methods pursuant to the EPA RRP rule. In addition, pursuant to Title X requirements landlords and sellers are required to disclose the results of lead inspections to tenants and purchasers, and to provide the warning notice and pamphlets in accordance with Title X and State requirements. The scope of testing for this project did not include an inspection or risk assessment for State or federal lead-based paint rules and regulations.

This report is not intended to be used as a removal specification and the scope of testing did not include a lead-based paint inspection or risk assessment for State or HUD lead-based paint requirements and regulations.

Other Hazardous & Regulated Material

During this survey, RPF conducted an inventory of accessible areas of each building for other potentially hazardous or regulated materials. This includes fluorescent light bulbs and ballasts, mercury containing components, batteries, hydraulic systems, and other potentially regulated materials and components that may need special consideration during future renovation or demolition activities.

Observations were limited to readily accessible areas and stored waste materials. Except for limited spot checks of de-energized systems, equipment and fixtures were not dissembled for inspection. Suspect materials were not specifically tested or analyzed to confirm these findings.

Each of the buildings was found to contain some form of regulated or other hazardous material. A summary of findings is included below. Further characterization and possibly testing may be necessary prior to disposal.

Summary of Universal Wastes Observed (Approximate Quantities)						
Type of Material	Building F	Building H	Green Barn	IF&W Building	Pooler Pavilion (new wing)	Pooler Pavilion (old wing)
Fluorescent Bulbs	342	556	12 (CFL)	834	415	528
Light Ballasts	171	172	-	278	208	264
Batteries	16	28	-	16	50	56
Building System Hydraulics	1	1	-	-	1	1
Mercury Switches	-	-	-	-	-	-
Fire Extinguishers	6	10	-	3	6	8

Fluorescent Bulbs & Mercury Switches

Fluorescent lamps contain a small quantity of mercury that may pose a hazard to human health or the environment if the materials are not managed properly. These bulbs, along with mercury switches (thermostats) should be segregated and properly disposed of during demolition.

Light Ballasts

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage, and disposal of PCBs.

With regard to light ballasts, approximately half were manufactured prior to 1979 and nearly all pre-1979 ballasts contain PCBs. Ballasts manufactured after July 1, 1978, and that do not contain PCBs are required to be clearly marked "No PCBs". Please note that it is possible that post 1979 ballasts may contain some PCBs in the capacitor oils and more information should be requested if needed for applicable State and federal agencies. PCBs may also be present in common household appliances with small capacitors and as dielectric fluids; other electric equipment such as transformers, switches, and voltage regulators; and recent studies have shown PCB content in caulk and some paints. Documentation of current conditions and in-depth hazard assessments, and laboratory testing for these other PCB usages, is beyond the scope-of-work for this initial survey.
During demolition, additional inspections should be made to identify PCB versus non-PCB containing ballasts. Ballasts should be checked for a "PCB-Free" or "No PCBs" label prior to disposal. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and federal requirements. There is a substantial cost difference for disposal of PCB ballasts versus non-PCB ballasts.

Batteries

Many batteries should not be disposed through typical garbage or recycling methods. Many nickel-cadmium (Ni-Cd) batteries and small sealed lead batteries must be segregated and properly recycled or disposed in accordance with state and federal regulations.

Building System Hydraulics

Hydraulic oils, such as those present in building elevator systems or other hydraulic lift systems, must be properly removed and disposed prior to dismantling and disposal of such systems. Hydraulic oils can contain polychlorinated biphenyls (PCBs) and other harmful contaminants which must be managed and disposed of in accordance with US EPA regulations. While newer hydraulic oils (after 1978) and older hydraulic systems that have had the oils changed since 1978, should be free of PCBs, older systems may still contain PCBs. Special consideration must be given to these materials during demolition.

Many common items can contain regulated or otherwise hazardous materials that requires special consideration, handling, and disposal during demolition of a building. must be removed and properly disposed of prior to renovation or demolition activities. Many of these wastes are defined as "Universal Waste" by the Maine Department of Environmental Protection and may require special handling, packaging, and disposal. During project design, a building or site-specific work plan should be developed

to document and detail the specific storage, labeling, packaging, and disposal requirements based on the specific items and renovation or demolition planned. Such delineation is beyond the scope of this survey.

Preliminary Budget Estimates

RPF has prepared the following, order-of-magnitude estimates for the abatement of asbestos containing building materials identified in this survey in accordance with applicable federal and state regulations as well as fees for remediation design, oversight monitoring and related testing and laboratory analysis. The estimates were prepared based on similar remediation work as well as preliminary discussions with remediation contractors in the Maine area. The actual costs will vary, in some scenarios significantly, based on grouping of work, scheduling and phasing of work requirements, and final project design.

It should be noted that these budget estimates do not include any considerations for lead paint abatement as these conditions typically have a low impact on the cost of building demolition.

Although costs may also vary if some of the buildings are to undergo remediation work only as needed to facilitate renovation activity and occupancy, the impact on final costs may not be significant overall. However, further information on the types and extent of renovation versus full demolition will be needed to prepare further remediation estimates and breakouts.

Preliminary Budget Estimates	
Building	Preliminary Estimates
Building F	$3,000-$4,000
Building H	$15,000-$20,000
Green Barn	$3,000-$4,000
IF&W Building	$2,000-$3,000
Pooler Pavilion (new wing)	$900,000-$1,000,000
Pooler Pavilion (old wing)	$550,000-$650,000

Conclusions

Based on the survey findings, each building was found to contain ACBM, LP or some form of other hazardous building material.

In order to proceed with renovation or demolition activities at each building, further abatement and/or remediation may be necessary depending on the scope. This report is not intended to be used as an abatement specification or remediation work plan. To proceed with abatement or remediation work, a work plan or project design documents should be prepared prior to abatement or remediation by a qualified, and in many cases, certified project designer. As part of the design, additional site testing and analysis may also be required as discussed in this report. The specification or work plan should then be used to solicit bids from qualified contractors. Only properly licensed contractors should be used for asbestos abatement and disposal. A qualified industrial hygiene/testing consultant should also conduct sufficient testing and inspections of the work, independent of the contractor.

All employees and contractors that may access or otherwise disturb areas with suspect ACBM, LP or other hazardous materials present should be notified of the presence and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors, and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions.

No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,
RPF ENVIRONMENTAL, INC.

Allan D. Mercier, CMC
Operations Manager

Enclosures:
Appendix A: Asbestos Testing Results
Appendix B: Lead Paint Testing Results
Appendix C: Certificates and Licenses
Appendix D: Summary of Methodology and Limitations
22.1049 DDPC Bangor 101922 Report

APPENDIX A

TABLE 1

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Building F				
Sheet Flooring (white)	Elevator Car	48 square feet	Category I Nonfriable	1.3% Chrysotile
Building H				
Pipe and Fitting Insulation	Lower level, lobby vestibule	75 linear feet	Friable ACM	40% Chrysotile
	Lower-Level records storage mechanical room	Unknown quantity observed extending into underground chase		
Sink Basin Undercoat (white)	Basement kitchen, 1st floor break room, 2nd floor break room and FMO evidence room, and 4th floor break room	5 sink basins @ 6 square feet each	Category II Nonfriable	5.9% Chrysotile
Green Barn				
Caulk (white)	North Side, Windows on Garage Doors	25 linear feet	Category II Nonfriable	2% Chrysotile
IF & W Building				
Transite Panels (gray)	Basement, northeast corner room, sidewalls of fume hood	40 square feet	Category II Nonfriable	20% Chrysotile
Pooler Pavilion (new wing)				
Pipe Insulation (white)	Basement, hallways, stairwells, and rooms throughout	2,500 linear feet	Friable ACM	15% Chrysotile, 5% Amosite
Pipe Fitting Insulation (white)				15% Amosite, 10% Chrysotile
Pipe Insulation (grey AirCell)			Friable ACM	55% Chrysotile
Pipe Fitting Insulation (associated with AirCell Pipe Insulation)			Non-ACM	<1% Amosite
Exhaust Breeching	Basement, Generator Room	20 linear feet	Friable ACM	60% Chrysotile
Exhaust Breeching Elbows				55% Chrysotile

TABLE 1

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Switchgear	Basement Electrical Room	30 square feet	Category II Nonfriable	Assumed ACM
Sheet Flooring	1st and 2nd floor throughout	22,000 square feet	Category I Nonfriable	3% Chrysotile
Mastic (black)	Corridors throughout at seams of vinyl sheet flooring	2,000 linear feet	Category I Nonfriable	5.6% Chrysotile
Window Glaze	Exterior windows, throughout	5,300 linear feet	Non-ACM	0.1% Chrysotile
9" Floor Tile (grey/brown) and Flooring Mastic (black)	Basement, throughout south wing, central stairwell, and south stairwell 1st and 2nd floor, closets, north, center, and south stairwells, and main entry lobby	12,340 square feet	Category I Nonfriable	4.7% Chrysotile
			Non-ACM	0.5-2.3% Chrysotile
Sink Basin Undercoat (black)	Basement, 1st, and 2nd floor kitchenettes and nurse's stations	8 sink basins (50 square feet total)	Category I Nonfriable	5.6% Chrysotile
Caulk (white)	Exterior, throughout wing around windows and doors	3,780 linear feet	Category II Nonfriable	4.5% Chrysotile
Caulk (black)	1st and 2nd floor, lounge windows in north and south wings	320 linear feet	Category II Nonfriable	8.9% Chrysotile
Pooler Pavilion (old wing)				
Fire Door Insulation (white)	1st and 2nd floor, utility room and soiled linen doors Ground Floor, chapel doors	10 Doors, 21 square feet each	Friable ACM	8% Amosite 3% Chrysotile
Pressboard (white)	Ground floor, 1st and 2nd floor behind wall mount heaters	140 panels, approximately 1,120 square feet	Friable ACM	60% Chrysotile
Pipe and Fitting Insulation	Ground Floor Chapel	120 linear feet	Friable ACM	10% Amosite

TABLE 1

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
9" Floor Tile (maroon and black) and Black Flooring Mastic	2nd Floor Throughout 1st Floor Throughout Ground Floor, Throughout	11,000 square feet 11,000 square feet 7,500 square feet	Category I Nonfriable	6.8% Chrysotile
Caulk (white)	Throughout building at exterior windows, under trim molding. Only residual observed	222 window openings, up to 16 linear feet per opening	Category II Nonfriable	1.8% Chrysotile
Sink Basin Undercoat	1st and 2nd floor dish washing rooms	4 counters, approximately 30 square feet per counter 120 square feet total	Category II Nonfriable	9.8% Chrysotile
Tan Sheet Flooring	1st and 2nd floor, north and south bathrooms	140 square feet	Category I Nonfriable	13.3% Chrysotile
Stair Tread Floor Tiles	North, South and Central Stairwells	1,000 square feet	Category I Nonfriable	5.6% Chrysotile
Black Mastic				2.0% Chrysotile
Sink Basin Undercoat (black)	1st and 2nd floor, north and south nurse's station kitchenette and soiled linen rooms	8 sinks at approximately 6 square feet each	Category II Nonfriable	4.9% Chrysotile

Notes:

- Please note that Category 1 and Category 2 nonfriable ACM are recategorized as friable and/or RACM under certain conditions. Current State asbestos regulations are stricter and more comprehensive than the EPA NESHAPs requirements.
- All quantities are approximate only and should be confirmed during abatement project design and abatement bidding.
- It is possible that some concealed or inaccessible ACBM is present. Care should be used when renovating/demolishing inaccessible building space. Further explorative survey work may be necessary during design and/or in conjunction with demolition.
- Table 1 does not include a listing of all ACBM and suspect ACBM present at the site, only the materials found to be ACBM during the limited testing of this limited survey. Full testing and inspections are required to further identify the types, locations and quantities of ACBM present at this site.
- This survey did not include roofing on any of the buildings surveyed.

TABLE 2

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Description	Asbestos Content
071822-Hg1a - A	Skim coat, White, 2nd floor, Northeast bathroom wall (31)	None Detected
071822-Hg1a - B	Plaster, Grey, 2nd floor, Northeast bathroom wall (31)	None Detected
071822-Hg1b - A	Skim coat, White, 1st floor, Northeast closet wall (18)	None Detected
071822-Hg1b - B	Plaster, Grey, 1st floor, Northeast closet wall (18)	None Detected
071822-Hg1c - A	Skim coat, White, Attic ceiling, Northwest side	None Detected
071822-Hg1c - B	Plaster, Grey, Attic ceiling, Northwest side	None Detected
071822-Hg1d - A	Skim coat, White, Attic wall, Northwest side	None Detected
071822-Hg1d - B	Plaster, Grey, Attic wall, Northwest side	None Detected
071822-Hg1e - A	Skim coat, White, Attic wall, South side	None Detected
071822-Hg1e - B	Plaster, Grey, Attic wall, South side	None Detected
071822-Hg1f - A	Skim coat, White, 1st floor ceiling, Room 34	None Detected
071822-Hg1f - B	Plaster, Grey, 1st floor ceiling, Room 34	None Detected
071822-Hg1g - A	Skim coat, White, 1st floor, Main hallway ceiling, Outside of room 9	None Detected
071822-Hg1g - B	Plaster, Grey, 1st floor, Main hallway ceiling, Outside of room 9	None Detected
071822-Hg1h - A	Skim coat, White, Basement wall, Northwest side	None Detected
071822-Hg1h - B	Plaster, Grey, Basement wall, Northwest side	None Detected
071822-Hg1i - A	Skim coat, White, Basement ceiling, Northwest side	None Detected
071822-Hg1i - B	Plaster, Grey, Basement ceiling, Northwest side	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 18, 2022

Sample ID	Description	Asbestos Content
071822-Hg3a	Suspended Ceiling Tile, White, 2nd floor, Room 24	None Detected
071822-Hg3b	Suspended Ceiling Tile, White, 1st floor, Room 34	None Detected
071822-Hg3c	Suspended Ceiling Tile, White, 1st floor, Room 29	None Detected
071822-Hg9a	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg9b	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg9c	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg11	Mortar with adhesive, Grey + Tan, 2nd floor, Southeast kitchen doorway	None Detected
071822-Hg13a	Ceramic Tile Grout, White, 2nd floor, Southeast bathroom (18)	None Detected
071822-Hg13b	Ceramic Tile Grout, White, 1st floor, Northwest, Room 5, East side	None Detected
071822-Hg13c	Ceramic Tile Grout, White, 1st floor, Northwest, Room 5, West side	None Detected
071822-Hg16a	Blown-in insulation, White, Northwest side of attic	None Detected
071822-Hg16b	Blown-in insulation, White, Northwest side of attic	None Detected
071822-Hg16c	Blown-in insulation, White, South side of attic	None Detected
071822-Hg20a	Textured surfacing, White, 1st floor ceiling, Northwest hallway	None Detected
071822-Hg20b	Textured surfacing, White, 1st floor ceiling, Middle hallway, West end	None Detected
071822-Hg20c	Textured surfacing, White, 1st floor ceiling, Middle hallway, East end	None Detected
071822-Hg22a	Grout, Grey, 1st floor, Room 5 floor	None Detected
071822-Hg22b	Grout, Grey, 1st floor, Room 5 floor	None Detected

Notes:

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TABLE 2

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 18, 2022

Sample ID	Description	Asbestos Content
071822-Hg22c	Grout, Grey, 1st floor, Room 5 floor	None Detected
071822-Hg23	Flue Cement, Grey, Basement Over Southwest exit	None Detected
071822-Hg24a	Gypsum & Joint Compound, White + Grey, 1st floor, Room 12	None Detected
071822-Hg24b	Gypsum & Joint Compound, White + Grey, 1st floor, Room 14	None Detected
071822-Hg24c	Gypsum & Joint Compound, White + Grey, 1st floor, Room 16	None Detected
071822-Hg24d	Gypsum & Joint Compound, White + Grey, 1st floor, Room 27	None Detected
071822-Hg24e	Gypsum & Joint Compound, White + Grey, 1st floor, Room 33	None Detected
091522-HG25a	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG25b	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG25c	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG26a	Floor paper, Tan, attic under hardwood	None Detected
091522-HG26b	Floor paper, Tan, attic under hardwood	None Detected
091522-HG26c	Floor paper, Tan, attic under hardwood	None Detected

RPF File No. 22.1049

Notes:

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TABLE 3

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 18, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG2a-A	Floor tile, White & Red, 2nd floor hallway, East end	26.2	66.2	7.60	None Detected
071822-HG2a-B	Mastic, Black, 2nd floor hallway, East end	36.7	-	63.3	None Detected
071822-HG2b-A	Floor tile, White & Red, 2nd floor hallway, East end	26.4	68.2	5.4	None Detected
071822-HG2b-B	Mastic, Black, 2nd floor hallway, East end	66.0	-	34.0	None Detected
71822-HG2c-A	Floor tile, White & Red, 2nd floor hallway, East end	26.2	70.0	3.80	None Detected
071822-HG2c-B	Mastic, Black, 2nd floor hallway, East end	93.5	-	6.50	None Detected
071822-HG4a	Cove base adhesive, Tan, 2nd floor, Northeast Bathroom (31)	37.1	-	62.9	None Detected
071822-HG4b	Cove base adhesive, Tan, 1st floor, Northeast wing (21)	37.5	-	62.5	None Detected
071822-HG4c	Cove base adhesive, Tan, 2nd floor, Room 24	37.6	-	62.4	None Detected
071822-HG5a-A	Floor tile, Brown, 2nd floor, Room 24	26.0	70.8	3.20	None Detected
071822-HG5a-B	Adhesive, Tan, 2nd floor, Room 24	46.0	-	54.0	None Detected
071822-HG5b-A	Floor tile, Brown, 1st floor, Northeast closet (18)	29.1	69.5	1.40	None Detected
071822-HG5b-B	Adhesive, Tan, 1st floor, Northeast closet (18)	65.7	-	34.3	None Detected
071822-HG5c-A	Floor tile, Brown, 1st floor, Room 31	22.9	75.8	1.30	None Detected
071822-HG5c-B	Adhesive, Tan, 1st floor, Room 31	62.0	-	31.7	None Detected

Notes:

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TABLE 3 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG6a	Carpet adhesive, Tan, 2nd floor, Room 24	37.3	-	38.0	None Detected
071822-HG6b	Carpet adhesive, Tan, 3rd floor, Main hallway (38)	49.3	-	62.7	None Detected
071822-HG6c	Carpet adhesive, Tan, 1st floor, Northeast wing (24)	26.6	-	50.7	None Detected
071822-HG7a-A	Floor tile, Red & White, 1st floor, Main hallway	63.2	68.0	5.40	None Detected
071822-HG7a-B	Mastic, Yellow, 1st floor, Main hallway	63.2	-	36.8	None Detected
071822-HG7b-A	Floor tile, Red & White, 1st floor, Main hallway	45.3	52.8	1.90	None Detected
071822-HG7b-B	Mastic, Yellow, 1st floor, Main hallway	74.7	-	25.3	None Detected
071822-HG7c-A	Floor tile, Red & White, 1st floor, Main hallway	23.6	72.7	3.70	None Detected
071822-HG7c-B	Mastic, Yellow, 1st floor, Main hallway	86.6	-	13.4	None Detected
071822-HG8a	Caulking, White, 2nd floor, Room 24, Door	26.6	-	73.4	None Detected
071822-HG8b	Caulking, White, 1st floor, Room 15, wall seam	26.69	-	74.0	None Detected
071822-HG8c	Caulking, White, 1st floor, Room 30, window frame	45.7	-	54.3	None Detected
071822-HG10	Sink Basin Coating, White, 2nd Floor, Southeast Kitchen	29.4	-	70.6	None Detected
071822-HG12	Laminate Countertop, Adhesive, Clear, 2nd Floor, Southeast Kitchen	90.9	-	9.1	None Detected
071822-HG14a-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	19.4	64.2	16.4	None Detected

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TABLE 3 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG14a-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	73.9	-	26.1	None Detected
071822-HG14b-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	20.6	77.7	1.70	None Detected
071822-HG14b-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	30.6	-	69.4	None Detected
071822-HG14c-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	27.7	71.3	1.00	None Detected
071822-HG14c-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	69.9	-	31.0	None Detected
071822-HG15a	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (18)	47.2	-	52.8	None Detected
071822-HG15b	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (21)	46.9	-	53.1	None Detected
071822-HG15c	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (24)	44.2	-	55.8	None Detected
071822-HG17a	Duct Sealant, Grey, Attic Duct, West Side of Attic	36.7	-	63.3	None Detected
071822-HG17b	Duct Sealant, Grey, Attic Duct, Middle of Attic	37.2	-	62.8	None Detected
071822-HG17c	Duct Sealant, Grey, Attic Duct, East Side of Attic	37.5	-	62.5	None Detected
071822-HG18a	Window Glaze, White, Attic, West Window	11.6	85.54	2.86	None Detected
071822-HG18b	Window Glaze, White, 1st Floor, Room 30	13.0	81.0	6.00	None Detected
071822-HG18c	Window Glaze, White, 1st Floor, Main Floor, Far East Window	11.4	819	6.70	None Detected

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TABLE 3 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG19a	Ceramic Tile Adhesive, Brown, 2nd Floor, Northwest Bathroom Wall	97.4	-	63.3	None Detected
071822-HG19b	Ceramic Tile Adhesive, Brown, 1st Floor, Northwest Bathroom Wall	97.2	-	2.80	None Detected
071822-HG19c	Ceramic Tile Adhesive, Brown, 1st Floor, Northwest Bathroom Wall	41.0	-	59.0	None Detected
071822-HG21a-A	Floor tile, Tan, 1st floor, Room 9	28.9	68.6	2.50	None Detected
071822-HG21a-B	Mastic, Yellow, 1st floor, Room 9	59.6	-	40.4	None Detected
071822-HG21b-A	Floor tile, Tan, 1st floor, Room 11	27.2	71.4	1.4	None Detected
071822-HG21b-B	Mastic, Yellow, 1st floor, Room 11	58.5	-	41.5	None Detected
071822-HG21c-A	Floor tile, Tan, 1st floor, Room 29	28.7	54.9	16.4	None Detected
071822-HG21c-B	Mastic, Yellow, 1st floor, Room 29	77.8	-	22.2	None Detected
091522-HG27a	Sheet Flooring, White, Elevator Car	56.36%	0%	42.34% Chrysotile	1.3% Chrysotile
091522-HG27b	Sheet Flooring, White, Elevator Car	-	-	-	*SFP
091522-HG27c	Sheet Flooring, White, Elevator Car	-	-	-	*SFP

RPF File No. 22.1049

Notes:

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TABLE 4

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy– EPA 600/R-93/116 Method
Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG2a - A	Plaster finish, white, 4th floor, Room 113	None Detected
072522-HG2a - B	Plaster base, gray, 4th floor, Room 113	None Detected
072522-HG2b - A	Plaster finish, white, 4th floor, Room 105	None Detected
072522-HG2b - B	Plaster base, gray, 4th floor, Room 105	None Detected
072522-HG2c - A	Plaster finish, white, 4th floor, Room 97	None Detected
072522-HG2c - B	Plaster base, gray, 4th floor, Room 97	None Detected
072522-HG2d - A	Plaster finish, white, 3rd floor, Corridor Ceiling	None Detected
072522-HG2d - B	Plaster base, gray, 3rd floor, Corridor Ceiling	None Detected
072522-HG2e - A	Plaster finish, white, 3rd floor, Room 308 Ceiling	None Detected
072522-HG2e - B	Plaster base, gray, 3rd floor, Room 308 Ceiling	None Detected
072522-HG2f - A	Plaster finish, white, 2nd floor, Break Room	None Detected
072522-HG2f - B	Plaster base, gray, 2nd floor, Break Room	None Detected
072522-HG2g - A	Plaster finish, white, 1st floor, Room 101 Wall	None Detected
072522-HG2g - B	Plaster base, gray, 1st floor, Room 101 Wall	None Detected
072522-HG2h - A	Plaster finish, white, Basement, Lobby	None Detected
072522-HG2h - B	Plaster base, gray, Basement, Lobby	None Detected
072522-HG2i - A	Plaster finish, white, Basement, Records	None Detected
072522-HG2i - B	Plaster base, gray,, Basement, Records	None Detected
072522-HG3a	Suspended Ceiling Tile, gray, 2x2, Pin holed, 4th floor, Hallway at Room 113	None Detected

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG3b	Suspended Ceiling Tile, gray, 2x2, Pin holed, 3rd floor, Reception	None Detected
072522-HG3c	Suspended Ceiling Tile, gray, 2x2, Pin holed, 3rd floor, Corridor	None Detected
072522-HG5a	Gypsum Board and Joint Compound, white, 4th floor, Room 105 Exterior Wall	None Detected
072522-HG5b	Gypsum Board and Joint Compound, white, 3rd floor, Corridor Wall	None Detected
072522-HG5c	Gypsum Board and Joint Compound, white, 2nd floor, Corridor	None Detected
072522-HG5d	Gypsum Board and Joint Compound, white, Basement, Wall	None Detected
072522-HG7a	12" Ceiling Tile, Orange, 4th floor, Room 99	None Detected
072522-HG7b	12" Ceiling Tile, Orange, 4th floor, Room 100	None Detected
072522-HG7c	12" Ceiling Tile, Orange, 4th floor, Room 94	None Detected
072522-HG9a	Wall Filler, White, 4th floor, Room 94 to Room 95	None Detected
072522-HG9b	Wall Filler, White, Basement, Demising Wall, Room 1	None Detected
072522-HG9c	Wall Filler, White, Basement, Demising Wall, Room 1	None Detected
072522-HG10a	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG10b	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG10c	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG14a	Ceiling tile, white, 2x2, Fissured, 4th floor, Room 89	None Detected
072522-HG14b	Ceiling tile, white, 2x2, Fissured, Basement, Records Left Bathroom	None Detected
072522-HG14c	Ceiling tile, white, 2x2, Fissured, Basement, Records Left Bathroom	None Detected
072522-HG18a	Pipe Insulation, gray, Basement, Lobby	40% Chrysotile
072522-HG18b	Pipe Insulation, gray, Basement, Records Storage, Mechanical Room	*SFP

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG18c	Pipe Insulation, gray, Basement, Records Storage, Mechanical Room	*SFP
072522-HG19a	Fitting, white, Basement, Lobby	40% Chrysotile
072522-HG19b	Fitting, white, Basement, Lobby	*SFP
072522-HG19c	Fitting, white, Basement, Lobby	*SFP
072522-HG20a	Fitting on Fiberglass Run, White, Basement Lobby	None Detected
072522-HG22a	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22b	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22c	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22d	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22e	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG1a	Carpet Glue, Yellow, 4th Floor, Room 119	50.6	0.0	49.4	None Detected
072522-HG1b	Carpet Glue, Yellow, 3rd Floor, Reception	55.3	0.0	44.7	None Detected
072522-HG1c	Carpet Glue, Yellow, 2nd Floor, Room 223	42.2	0.0	57.8	None Detected
072522HG1d	Carpet Glue, Yellow, 1st Floor, Lobby Closet	9.1	0.0	90.9	None Detected
072522-HG4a	Covebase Adhesive, Yellow, 4th Floor, Corridor	70.2	0.0	29.8	None Detected
072522-HG4b	Covebase Adhesive, Yellow, 3rd Floor, Room 304B	66.5	0.0	33.5	None Detected
072522-HG4c	Covebase Adhesive, Yellow, 3rd Floor, Room 304C	54.4	0.0	45.6	None Detected
072522-HG4d	Covebase Adhesive, Yellow, 2nd Floor, Corridor at Conference Room	49.1	0.0	50.9	None Detected
072522-HG6a	Glaze, white, 4th Floor, Room 101	15.2	78.6	6.2	None Detected
072522-HG6b	Glaze, white, 2nd Floor, Corner Office	14.1	82.3	3.6	None Detected
072522-HG6c	Glaze, white, 1st Floor, Office 115	15.0	77.9	7.1	None Detected
072522-HG8a	Glue, Yellow, 4th Floor, Room 99	50.2	0.0	49.8	None Detected
072522-HG8b	Glue, Yellow, 4th Floor, Room 100	50.3	0.0	49.7	None Detected
072522-HG8c	Glue, Yellow, 4th Floor, Room 94	49.2	0.0	50.8	None Detected
072522-HG11a	Sink Basin Undercoating, White, 4th Floor, Men's Bathroom	31.0	0.0	69.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG11b	Sink Basin Undercoating, White, 3rd Floor, Room 318B	40.9	0.0	53.2	5.9 Chrysotile
072522-HG11c	Sink Basin Undercoating, White, 2nd Floor, Break Room	-	-	-	*SFP
072522-HG11d	Sink Basin Undercoating, White, 1st Floor, Break Room 121	-	-	-	*SFP
072522-HG12a	Sheet Floor, 4th Floor, Room 88	50.6	32.7	16.7	None Detected
072522-HG12b	Sheet Floor, 4th Floor, Room 89	60.8	19.1	20.1	None Detected
072522-HG12c	Sheet Floor, 4th Floor, Room 89	49.1	25.9	25.0	None Detected
072522-HG13a	Sink Basin Undercoating, Black, 4th Floor, Room 89 Kitchenette	19.9	0.0	80.1	None Detected
072522-HG15a-A	Rubberized Tile, Green, Atrium	40.9	0.0	59.1	None Detected
072522-HG15a-B	Mastic, Green, Atrium	47.6	0.0	52.4	None Detected
072522-HG15b-A	Rubberized Tile, Green, Atrium	40.9	0.0	59.1	None Detected
072522-HG15b-B	Mastic, Green, Atrium	53.3	0.0	46.7	None Detected
072522-HG15c-A	Rubberized Tile, Green, Stair tread	41.8	0.0	58.2	None Detected
072522-HG15c-B	Mastic, Green, Stair tread	66.7	0.0	33.3	None Detected
072522-HG16a-A	12" Floor tile, Green, 3rd Floor, 318A	15.8	73.3	10.9	None Detected
072522-HG16a-B	Mastic, Green, 3rd Floor, 318A	56.3	0.0	43.7	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG16b-A	12" Floor tile, Green, 3rd Floor, 318A	16.8	81.6	1.6	None Detected
072522-HG16b-B	Mastic, Green, 3rd Floor, 318A	73.1	0.0	26.9	None Detected
072522-HG16c-A	12" Floor tile, Green, 3rd Floor, 318A	15.0	83.3	1.7	None Detected
072522-HG16c-B	Mastic, Green, 3rd Floor, 318A	25.0	0.0	75.0	None Detected
072522-HG17a-A	12" Floor tile, Pink, 3rd Floor, 318B	23.6	70.9	5.5	None Detected
072522-HG17a-B	Mastic, Pink, 3rd Floor, 318B	54.2	0.0	45.8	None Detected
072522-HG17b-A	12" Floor tile, Pink, 3rd Floor, 318B	26.9	70.8	2.3	None Detected
072522-HG17b-B	Mastic, Pink, 3rd Floor, 318B	34.0	0.0	66.0	None Detected
072522-HG17c-A	12" Floor tile, Pink, 3rd Floor, 318B	27.0	71.2	1.8	None Detected
072522-HG17c-B	Mastic, Pink, 3rd Floor, 318B	31.7	0.0	68.3	None Detected
072522-HG21a	Glaze, White, Basement, Room 1 to Hallway	17.6	81.2	1.2	None Detected
072522-HG21b	Glaze, White, Basement, Room 1 to Hallway	21.9	77.5	0.6	None Detected
072522-HG21c	Glaze, White, Basement, Room 1 to Hallway	19.4	73.5	7.1	None Detected
072522-HG24a-A	12" Floor tile, White, Basement, Kitchen	17.1	77.6	5.3	None Detected
072522-HG24a-B	Mastic, Yellow, Basement, Kitchen	71.2	0.0	28.8	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG24b-A	12" Floor tile, White, Basement, Kitchen	17.5	69.5	13.0	None Detected
072522-HG24b-B	Mastic, Yellow, Basement, Kitchen	93.8	6.0	6.2	None Detected
072522-HG24c-A	12" Floor tile, White, Basement, Kitchen	17.2	82.2	0.6	None Detected
072522-HG24c-B	Mastic, Yellow, Basement, Kitchen	77.8	0.0	22.2	None Detected

RPF File No. 22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

HARRIMAN ARCHITECTS
DOROTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Green Barn

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: September 15, 2022

Sample ID	Description	Asbestos Content
091522-HG1a	Caulk, White, North Side Along Garage Door	2% Chrysotile
091522-HG1b	Caulk, White, North Side Along Garage Door	*SFP
091522-HG1c	Caulk, White, North Side Along Garage Door	*SFP
091522-HG2a	Window Glaze, Beige, Lower-Level Window on South Side	None Detected
091522-HG2b	Window Glaze, Beige, Lower-Level Window on West End	None Detected
091522-HG2c	Window Glaze, Beige, Lower-Level Window on West End	None Detected
091522-HG3a	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG3b	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG3c	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG4a	Siding Paper, Black, East Side Behind Wood Siding	None Detected
091522-HG4b	Siding Paper, Black, East Side Behind Wood Siding	None Detected
091522-HG4c	Siding Paper, Black, East Side Behind Wood Siding	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG1a - A	Plaster finish, white, 1st floor, North Conference Room	None Detected
080422-HG1a - B	Plaster base, gray, 1st floor, North Conference Room	None Detected
080422-HG1b - A	Plaster finish, white, 1st floor, North Stair at 1.5 Landing	None Detected
080422-HG1b - B	Plaster base, gray, 1st floor, North Stair at 1.5 Landing	None Detected
080422-HG1c - A	Plaster finish, white, 3rd floor, Room 320 Closet	None Detected
080422-HG1c - B	Plaster base, gray, 3rd floor, Room 320 Closet	None Detected
080422-HG1d - A	Plaster finish, white, 3rd floor, Room 304	None Detected
080422-HG1d - B	Plaster base, gray, 3rd floor, Room 304	None Detected
080422-HG1e - A	Plaster finish, white, 3rd floor, Room 329	None Detected
080422-HG1e - B	Plaster base, gray, 3rd floor, Room 329	None Detected
080422-HG1f - A	Plaster finish, white, 2nd floor, Room 216	None Detected
080422-HG1f - B	Plaster base, gray, 2nd floor, Room 216	None Detected
080422-HG1g - A	Plaster finish, white, 2nd floor, ASC Documents Room	None Detected
080422-HG1g - B	Plaster base, gray, 2nd floor, ASC Documents Room	None Detected
080422-HG1h - A	Plaster finish, white, basement South stair	None Detected
080422-HG1h - B	Plaster base, gray, basement South stair	None Detected
080422-HG1i - A	Plaster finish, white, basement, North stair	None Detected
080422-HG1i - B	Plaster base, gray, basement, North stair	None Detected
080422-HG2a	Gypsum Board and Joint Compound, white/gray. 3rd floor, Room 310 Wall	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG2b	Gypsum Board and Joint Compound, white/gray. 2nd floor, Map Room	None Detected
080422-HG2c	Gypsum Board and Joint Compound, white/gray. 1st floor, Warden Conference Room	None Detected
080422-HG6a	Tectum-like Ceiling Tiles, 3rd floor, tan, North End Hallway	None Detected
080422-HG6b	Tectum-like Ceiling Tiles, 2nd floor, tan, South End Hallway	None Detected
080422-HG6c	Tectum-like Ceiling Tiles, 1st floor, tan, Center Hallway	None Detected
080422-HG7a	Grout, Ceramic Wall Tiles, white, 1st floor, Women's bathroom	None Detected
080422-HG7b	Grout, Ceramic Wall Tiles, white, 2nd floor, Women's bathroom	None Detected
080422-HG7c	Grout, Ceramic Wall Tiles, white, 3rd floor, Women's bathroom	None Detected
080422-HG9a	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG9b	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG9c	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG14a	Fume Hood Transite Panels, gray, Basement, Northeast Room	20% Chrysotile
080422-HG14b	Fume Hood Transite Panels, gray, Basement, Northeast Room	*SFP
080422-HG14c	Fume Hood Transite Panels, gray, Basement, Northeast Room	*SFP
080422-HG15a	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG15b	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG15c	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG20a	Insulation/cement, Grey, North stairwell floor	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG20b	Insulation/cement, Grey, North stairwell floor	None Detected
080422-HG20c	Insulation/cement, Grey, South stairwell floor`	None Detected
080422-HG21a	Rope Gasket, white, basement, boiler room	None Detected
080422-HG21b	Rope Gasket, white, basement, boiler room	None Detected
080422-HG21c	Rope Gasket, white, basement, boiler room	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG3a-A	12" Floor tile, White, 1st Floor, Hallway Outside Break Room	18.1	77.5	4.4	None Detected
080422-HG3a-B	Mastic, Yellow, 1st Floor, Hallway Outside Break Room	95.5	0.0	4.5	None Detected
080422-HG3b-A	12" Floor tile, White, 3rd Floor, Hallway Outside Room 324	16.2	72.9	10.9	None Detected
080422-HG3b-B	Mastic, Yellow, 3rd Floor, Hallway Outside Room 324	75.0	0.0	25.0	None Detected
080422-HG3c-A	12" Floor tile, White, 2nd Floor, Hallway Outside, ASC documents room	16.3	80.2	3.5	None Detected
080422-HG3c-B	Yellow, 2nd Floor, Hallway Outside, ASC documents room	58.3	0.0	41.7	None Detected
080422-HG4a-A	12" Floor tile, Green, 1st Floor, Hallway Outside Break room	16.0	80.0	4.0	None Detected
080422-HG4a-B	Mastic, Yellow, 1st Floor, Hallway Outside Break Room	45.5	0.0	54.5	None Detected
080422-HG4b-A	12" Floor tile, Green, 3rd Floor, Hallway Outside Room 324	15.5	82.7	1.8	None Detected
080422-HG4b-B	Mastic, Yellow, 3rd Floor, Hallway Outside Room 324	93.3	0.0	6.7	None Detected
080422-HG4c-A	12" Floor tile, Green, 2nd Floor, Hallway Outside ASC documents room	19.4	64.2	16.4	None Detected
080422-HG4c-B	Mastic, Yellow, 2nd Floor, Hallway Outside ASC Documents Room	40.0	0.0	60.0	None Detected
080422-HG5a	Carpet Glue, Yellow, 1st Floor, North Conference Room	48.3	0.0	51.7	None Detected
080422-HG5b	Carpet Glue, Yellow, 3rd Floor, South Conference Room	56.9	0.0	43.1	None Detected
080422-HG8a-A	Stair Tread, Green, North Stair	43.0	0.0	57.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG8a-B	Mastic, Yellow, North Stair	57.9	0.0	42.1	None Detected
080422-HG8b-A	Stair Tread, Green, North Stair	40.5	0.0	59.5	None Detected
080422-HG8b-B	Mastic, Yellow, North Stair	58.8	0.0	41.2	None Detected
080422-HG8c-A	Stair Tread, Green, South Stair	40.5	0.0	59.5	None Detected
080422-HG8c-B	Mastic, Yellow, South Stair	44.5	0.0	55.5	None Detected
080422-HG10a-A	12" Floor Tile, White, 1st floor, Conference Room	27.5	50.2	22.3	None Detected
080422-HG10a-B	Mastic, Yellow, 1st Floor, Conference Room	74.2	0.0	25.8	None Detected
080422-HG10b-A	12" Floor Tile, White, 1st floor, Conference Room	27.1	59.0	13.9	None Detected
080422-HG10b-B	Mastic, Yellow, 1st Floor, Conference Room	53.2	0.0	46.8	None Detected
080422-HG10c-A	12" Floor Tile, White, 1st floor, Conference Room	27.8	55.1	17.1	None Detected
080422-HG10c-B	Mastic, Yellow, 1st Floor, Conference Room	62.8	0.0	37.2	None Detected
080422-HG11a	Glaze, White, 3rd Floor, Men's Bathroom	18.0	61.8	20.2	None Detected
080422-HG11b	Glaze, White, 2nd Floor, Room 216	14.1	81.2	4.7	None Detected
080422-HG11c	Glaze, White, Basement, Northeast Corner Room	8.9	82.8	8.3	None Detected
080422-HG12a	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.0	0.0	70.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG12b	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.5	0.0	69.5	None Detected
080422-HG12c	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.4	0.0	69.6	None Detected
080422-HG13a-A	12" Floor tile, Tan, 2nd floor, Room 230	14.2	83.1	2.7	None Detected
080422-HG13a-B	Mastic, Yellow, 2nd Floor, Room 230	70.1	0.0	29.9	None Detected
080422-HG13b-A	12" Floor tile, Tan, 2nd Floor, Northwest Corner Room	15.3	81.8	2.9	None Detected
080422-HG13b-B	Mastic, Yellow, 2nd Floor, Northwest Corner Room	53.9	0.0	46.1	None Detected
080422-HG13c-A	12" Floor tile, Tan, 2nd floor, Room 216	15.3	83.2	1.5	None Detected
080422-HG13c-B	Mastic, Yellow, 2nd Floor, Room 216	68.1	0.0	31.9	None Detected
080422-HG16a	Duct Sealant, Gray, Basement, East Center Room	43.9	0.0	56.1	None Detected
080422-HG16b	Duct Sealant, Gray, Basement, East Center Room	42.5	0.0	57.5	None Detected
080422-HG16c	Duct Sealant, Gray, Basement, East Center Room	43.5	0.0	56.5	None Detected
080422-HG17a	Flooring Mastic, Mixed, 1st Floor, Hallway Outside Break Room	94.8	0.0	5.3	None Detected
080422-HG17b	Flooring Mastic, Mixed, 3rd Floor, Room 324	28.5	0.0	71.5	None Detected
080422-HG17c	Flooring Mastic, Mixed, 2nd Floor, ASC Documents Room	14.2	0.0	85.8	None Detected
080422-HG18a	Caulk, White, Basement, Exterior Window East Side	58.0	0.0	42.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
IF&W Building

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG18b	Caulk, White, Basement, Exterior Window East Side	58.3	0.0	41.7	None Detected
080422-HG18c	Caulk, White, Basement, Exterior Window East Side	62.4	0.0	37.7	None Detected
080422-HG19a	Firestop Caulk, Red, 3rd Floor, North Stairwell Ceiling	52.2	0.0	47.8	None Detected
080422-HG19b	Firestop Caulk, Red, 3rd Floor, North Stairwell Ceiling	59.6	0.0	40.4	None Detected
080422-HG19c	Firestop Caulk, Red, 3rd Floor, North Stairwell Ceiling	56.0	0.0	44.0	None Detected
080422-HG22a	Insulation Compound, Red/Gray, Basement Boiler Room	32.5	0.0	67.5	None Detected
080422-HG22b	Insulation Compound, Red/Gray, Basement Boiler Room	23.1	0.0	76.9	None Detected
080422-HG22c	Insulation Compound, Red/Gray, Basement Boiler Room	45.0	0.0	55.0	None Detected

RPF File No. 22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG1a	Gypsum board and joint compound, White, composite, 2nd floor Room 106	None Detected
080222-HG1b	Gypsum board and joint compound, White, composite, 1st floor Room 6	None Detected
080222-HG1c	Gypsum board and joint compound, White, composite, 1st floor Room 4	None Detected
080222-HG2a - A	Plaster, skim coat, White, 2nd floor shower room north	None Detected
080222-HG2a - B	Plaster base coat, grey, 2nd floor shower room north	None Detected
080222-HG2b - A	Plaster skim coat, White, 1st floor shower room north	None Detected
080222-HG2b - B	Plaster base coat, grey, 1st floor shower room north	None Detected
080222-HG2c - A	Plaster skim coat, White, 1st floor shower room south	None Detected
080222-HG2c - B	Plaster base coat, grey, 1st floor shower room south	None Detected
080222-HG2d - A	Plaster skim coat, White, basement Room 0068	None Detected
080222-HG2d - B	Plaster base coat, grey, basement Room 0068	None Detected
080222-HG2e - A	Plaster skim coat, White, basement Room 0065	None Detected
080222-HG2e - B	Plaster base coat, grey, basement Room 0065	None Detected
080222-HG2f - A	Plaster skim coat, White, basement, Room 0069	None Detected
080222-HG2f - B	Plaster base coat, grey, basement, Room 0069	None Detected
080222-HG11a	Ceiling tiles, grey (fissured), 2nd floor corridor north side	None Detected
080222-HG11b	Ceiling tiles, grey (fissured), 1st floor corridor south side	None Detected
080222-HG11c	Ceiling tiles, grey (fissured) 1st floor corridor north side	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG12a	Ceiling tiles, grey (dimpled), basement room PB0067	None Detected
080222-HG12b	Ceiling tiles, grey (dimpled), basement room PB0067	None Detected
080222-HG12c	Ceiling tiles, grey (dimpled), basement room PB0069	None Detected
080222-HG16a	Grout, White, ceramic wall tile, 2nd floor bathroom T7	None Detected
080222-HG16b	Grout, White, ceramic wall tile, 1st floor, north shower room	None Detected
080222-HG16c	Grout, White, ceramic wall tile, 1st floor, north shower room	None Detected
080222-HG22a	Grout, grey, quarry tile, basement PB0067	None Detected
080222-HG22b	Grout, grey, quarry tile, basement PB0068	None Detected
080222-HG22c	Grout, grey, quarry tile, basement PB0069	None Detected
080222-HG23a	Pipe insulation, White, Basement, Room PB0055	15% Chrysotile 5% Amosite
080222-HG23b	Pipe insulation, White, Basement, Room PB0062	*SFP
080222-HG23c	Pipe insulation, White, Basement, Entryway	*SFP
080222-HG24a	Pipe Fitting Insulation, White, Basement, Room PB0055	15% Amosite 10% Chrysotile
080222-HG24b	Pipe Fitting Insulation, White, Basement, Room PB0062	*SFP
080222-HG24c	Pipe Fitting Insulation, White, Basement, Entryway	*SFP
080222-HG26a	Exhaust breeching, White, Generator Room	60% Chrysotile
080222-HG26b	Exhaust breeching, White, Generator Room	*SFP
080222-HG26c	Exhaust breeching, White, Generator Room	*SFP
080222-HG30a	Breech elbow insulation, White, generator room	55% Chrysotile

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG30b	Breech elbow insulation, White, generator room	*SFP
080222-HG30c	Breech elbow insulation, White, generator room	*SFP
080222-HG31a	Pipe insulation, grey, airocell, basement, rec area	55% Chrysotile
080222-HG31b	Pipe insulation, grey, airocell, basement, nurse station at rec area	*SFP
080222-HG31c	Pipe insulation, grey, airocell, basement, nurse station at rec area	*SFP
080222-HG32a	Pipe fitting insulation, White (associated with airocell), basement rec area	None Detected
080222-HG32b	Pipe fitting insulation, White (associated with airocell), nurse station at rec area	None Detected
080222-HG32c	Pipe fitting insulation, White (associated with airocell), nurse station at rec area	<1% Amosite
091522-HG33a	Cementitious wall panel, Grey, penthouse, exterior wall	20% Chrysotile
091522-HG33b	Cementitious wall panel, Grey, penthouse, exterior wall	*SFP
091522-HG33c	Cementitious wall panel, Grey, penthouse, exterior wall	*SFP
091522-HG34a - A	Sheet Flooring, White, 2nd floor, North end corridor	None Detected
091522-HG34a - B	Mixed Mastic, Black/Yellow, 2nd floor, North end corridor	None Detected
091522-HG34b - A	Sheet Flooring, White, 2nd floor center corridor	None Detected
091522-HG34b - B	Mixed Mastic, Black/Yellow, 2nd floor center corridor	None Detected
091522-HG34c - A	Sheet Flooring, White, 1st floor, North end corridor	None Detected
091522-HG34c - B	Mixed Mastic, Black/Yellow, 1st floor, North end corridor	3% Chrysotile

RPF File No.

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
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TABLE 10

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG3a	Vinyl Sheet Flooring, White, 2nd Floor Nurses Station, North Side	39.7	0.0	60.3	None Detected
080222-HG3b	Vinyl Sheet Flooring, White, 2nd Floor Corridor by Room T6	43.5	0.0	56.5	None Detected
080222-HG3c	Vinyl Sheet Flooring, White, 1st Floor Corridor by Nurses Station South Side	44.8	0.0	55.2	None Detected
080222-HG4a	Mastic, Black, 2nd Floor Corridor at North Nurses Station, Seam	44.5	0.0	49.9	5.6 Chrysotile
080222-HG4b	Mastic, Black, 2nd Floor Corridor at Room T6, Seam	-	-	-	*SFP
080222-HG4c	Mastic, Black, 1st Floor Corridor by South Nurses Station, Seam	-	-	-	*SFP
080222-HG5a	Carpet Adhesive, Yellow, 1st Floor Nurses Office, South	58.5	0.0	41.5	None Detected
080222-HG5b	Carpet Adhesive, Yellow, 2nd Floor Lobby	60.0	0.0	40.0	None Detected
080222-HG5c	Carpet Adhesive, Yellow, 2nd Floor Reception off Lobby	69.9	0.0	30.1	None Detected
080222-HG6a	Caulk, Interior Windows, White, 2nd Floor, Room 106	35.3	0.0	64.7	None Detected
080222-HG6b	Caulk, Interior Windows, White, 2nd Floor Conference Room 2	37.4	0.0	626	None Detected
080222-HG6c	Caulk, Interior Windows, White, 1st Floor Kitchenette, Nort h	41.9	0.0	58.1	None Detected
080222-HG7a	Glaze, White, 2nd Floor Conference Room 2	12.0	85.4	2.5	0.1 Chrysotile
080222-HG7b	Glaze, White, 1st Floor Room Across from South Nurses Station	31.0	66.9	2.0	0.1 Chrysotile

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
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TABLE 10

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG7c	Glaze, White, 1st Floor South Sitting Room	33.5	63.8	2.6	0.1 Chrysotile
080222-HG8a	Caulk, Interior Seams/Doors, White, 1st Floor, Room 9, Wall Seam	29.4	0.0	70.6	None Detected
080222-HG8b	Caulk, Interior Seams/Doors, White, 1st Floor Toilet Room by South Nurses Station, Door	39.0	0.0	61.0	None Detected
080222-HG8c	Caulk, interior seams/doors, White, 1st floor north kitchenette, door	35.6	0.0	64.4	None Detected
080222-HG9a	Adhesive, mixed (covebase), 2nd floor Room 106	46.6	0.0	53.4	None Detected
080222-HG9b	Adhesive, Mixed (Covebase), 1st Floor, Room 9	33.2	0.0	66.8	None Detected
080222-HG9c	Adhesive, Mixed (Covebase), 1st Floor, North Nurses Station	43.5	0.0	56.5	None Detected
080222-HG10a-A	9" Floor Tile, grey/brown, 2nd Floor South Stairs, Landing	35.0	46.2	14.1	4.7 Chrysotile
080222-HG10a-B	Mastic, black, 2nd Floor, South Stairs, Landing	97.6	0.0	1.9	0.5 Chrysotile
080222-HG10b-A	9" Floor Tile, grey/brown, 2nd Floor South Stairs, Landing	-	-	-	*SFP
080222-HG10b-B	Mastic, black, 2nd Floor, South Stairs, Landing	95.4	0.0	3.7	0.9 Chrysotile
080222-HG10c-A	9" Floor Tile, grey/brown, 2nd Floor South Stairs, Landing	-	-	-	*SFP
080222-HG10c-B	Mastic, black, 2nd Floor, South Stairs, Landing	95.6	0.0	3.5	0.9 Chrysotile
080222-HG13a-A	12" Floor Tile, white, 2nd floor, Nurse's Office North Side	19.0	80.6	0.4	None Detected

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TABLE 10

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG13a-B	Adhesive, yellow, 2nd floor, Nurse's Office North Side	77.9	0.0	22.1	None Detected
080222-HG13b-A	12" Floor Tile, white, 1st floor, Nurse's Office North Side	18.7	81.1	0.2	None Detected
080222-HG13b-B	Adhesive, yellow, 1st Floor Nurses Office, North Side	75.5	0.0	24.5	None Detected
080222-HG13c-A	12" Floor Tile, white, 2nd Floor Nurse's Station North Side	19.2	80.3	0.5	None Detected
080222-HG13c-B	Adhesive, yellow, 2nd Floor Nurses Station, North Side	97.3	0.0	2.7	None Detected
080222-HG14a	Sink Basin Undercoat, Black, 2nd Floor, North Nurses Station	62.9	0.0	31.5	5.6 Chrysotile
080222-HG14b	Sink Basin Undercoat, Black, 2nd Floor, South Kitchenette	-	-	-	*SFP
080222-HG14c	Sink Bain Undercoat, Black, 1st Floor, North Kitchenette	-	-	-	*SFP
080222-HG15a	Mixed Mastics, 1st Floor, Northwest Corner Room, under rubber tiles	53.3	0.0	45.3	1.4 Chrysotile
080222-HG15b	Mixed Mastics, 1st Floor, North Center Room, under rubber tiles	-	-	-	*SFP
080222-HG15c	Mixed Mastics, 1st Floor, Northeast Corner Room, under rubber tiles	-	-	-	*SFP
080222-HG17a	Adhesive, White, Ceramic Wall Tile, 2nd Floor Bathroom T7	39.2	0.0	60.8	None Detected
080222-HG17b	Adhesive, White, Ceramic Wall Tile, 1st Floor, North Shower Room	23.0	0.0	77.0	None Detected
080222-HG17c	Adhesive, White, Ceramic Wall Tile, 1st Floor, North Shower Room	20.1	0.0	79.9	None Detected
080222-HG19a	Sink Basin Undercoat, White, Basement Room PB0069	36.6	0.0	63.4	None Detected

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TABLE 10

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG19b	Sink Basin Undercoat, White, Basement Room PB0069	36.5	0.0	63.5	None Detected
080222-HG19c	Sink Basin Undercoat, White, Basement Room PB0061	32.2	0.0	67.8	None Detected
080222-HG20a-A	9" Floor Tile, grey, Basement, Rec Room	26.9	40.5	22.8	9.8 Chrysotile
080222-HG20a-B	Mastic, black, Basement, Rec Room	77.4	0.0	20.3	2.3 Chrysotile
080222-HG20b-A	9” Floor Tile, grey, Basement, Utility Closet by Mechanical Room	-	-	-	*SFP
080222-HG20b-B	Mastic, black, Basement, Utility Closet by Mechanical Room	-	-	-	*SFP
080222-HG20c-A	9” Floor Tile, grey, Basement, Lobby	-	-	-	*SFP
080222-HG20c-B	Mastic, black, Basement, Lobby	-	-	-	*SFP
080222-HG21a-A	12” Brown Floor Tile, Basement North Room to Left	19.2	80.4	0.4	None Detected
080222-HG21a-B	Adhesive, yellow, Basement, North Room to Left	95.5	0.0	4.5	None Detected
080222-HG21b-A	12” Brown Floor Tile, Basement North Room to Left	26.4	73.0	0.6	None Detected
080222-HG21b-B	Adhesive, yellow, Basement, North Room to Left	48.8	0.0	51.2	None Detected
080222-HG21c-A	12” Brown Floor Tile, Basement North Room to Left	24.4	74.1	1.5	None Detected
080222-HG21c-B	Adhesive, yellow, Basement North Room to Left	24.4	0.0	75.6	None Detected
080222-HG27a-A	12” Grey/Tan Floor Tile, Basement, North Room	25.5	64.8	9.7	None Detected

Notes:

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TABLE 10

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (New Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG27a-B	Adhesive, yellow, Basement, North Room	48.8	0.0	51.2	None Detected
080222-HG27b-A	12" Grey/Tan Floor Tile, Basement, North Room	26.0	71.0	3.0	None Detected
080222-HG27b-B	Adhesive, yellow, Basement, North Room	56.8	0.0	43.2	None Detected
080222-HG27c-A	12" Grey/Tan Floor Tile, Basement, North Room	25.7	62.6	11.7	None Detected
080222-HG27c-B	Adhesive, yellow, Basement, North Room	62.0	0.0	38.0	None Detected
080222-HG28a	Caulk, White, Exterior, Courtyard Side, door to right of center entryway	24.5	0.0	71.0	4.5 Chrysotile
080222-HG28b	Caulk, White, Exterior, Courtyard Side, north corner window	-	-	-	*SFP
080222-HG28c	Caulk, White, Exterior, Courtyard Side, south corner window	-	-	-	*SFP
080222-HG29a	Caulk, Black, Interior Sitting Room Windows, 2nd Floor, North	40.9	0.0	50.2	8.9 Chrysotile
080222-HG29b	Caulk, Black, Interior Sitting Room Windows, 2nd Floor, South	-	-	-	*SFP
080222-HG29c	Caulk, Black, Interior Sitting Room Windows, 1st Floor, North	-	-	-	*SFP
091522-HG35a	Mixed Mastics, Yellow/Black, 2nd Floor, North End Corridor	21.43%	-	78.57%	None Detected
091522-HG35b	Mixed Mastics, Yellow/Black, 2nd Floor, Center Corridor	21.70%	-	78.30%	None Detected
091522-HG35c	Mixed Mastics, Yellow/Black, 1st Floor, North End Corridor	24.71%	-	75.29%	None Detected

RPF File No. 22.1049

Notes:

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TABLE 11

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method
Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG1a - A	Plaster finish, white, 2nd Floor, Shower Room 1	None Detected
071222-HG1a - B	Plaster base, grey, 2nd Floor, Shower Room 1	None Detected
071222-HG1b - A	Plaster finish, white, 1st Floor, Bath 1	None Detected
071222-HG1b - B	Plaster base, grey, 1st Floor, Bath 1	None Detected
071222-HG1c - A	Plaster finish, white, 1st Floor, Nurses Station, Kitchenette	None Detected
071222-HG1c - B	Plaster base, grey, 1st Floor, Nurses Station, Kitchenette	None Detected
071222-HG1d - A	Plaster finish, white, Ground Floor, PB0006	None Detected
071222-HG1d - B	Plaster base, grey, Ground Floor, PB0006	None Detected
071222-HG1e - A	Plaster finish, white, Ground Floor, PB0013	None Detected
071222-HG1e - B	Plaster base, grey, Ground Floor, PB0013	None Detected
071222-HG2a	Gypsum board and joint compound, white, composite, 2nd Floor, Room 52, Wall	None Detected
071222-HG2b	Gypsum board and joint compound, white, composite, 3rd Floor, Shower, Wall	None Detected
071222-HG2c	Gypsum board and joint compound, white, composite, 1st Floor, Hallway at Room 25	None Detected
071222-HG2d	Gypsum board and joint compound, white, composite, Ground Floor, Room 19	None Detected
071222-HG12a	Ceiling tile, Grey, 2x4 fissured, 3rd Floor, Room 52	None Detected
071222-HG12b	Ceiling tile, Grey, 2x4 fissured, Ground Floor, Southeast Kitchen	None Detected
071222-HG12c	Ceiling tile, Grey, 2x4 fissured, Ground Floor, Room 18	None Detected
071222-HG13a	Ceiling tile, Grey, 2x4 square pattern, 3rd Floor, South Hallway	None Detected
071222-HG13b	Ceiling tile, Grey, 2x4 square pattern, 1st Floor, South Hallway	None Detected

Notes:

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TABLE 11

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG13c	Ceiling tile, Grey, 2x4 square pattern, 1st Floor Room 36	None Detected
071222-HG14a	Ceiling tile, White, 2x4 pinhole, 2nd Floor, Conference Room 3	None Detected
071222-HG14b	Ceiling tile, White, 2x4 pinhole, 2nd Floor, Conference Room 4	None Detected
071222-HG14c	Ceiling tile, White, 2x4 pinhole, 2nd Floor, Conference Room 4	None Detected
071222-HG16a	Fire Door Insulation, White, 2nd Floor, North Wing, Utility Closet	8% Amosite 3% Chrysotile
071222-HG16b	Fire Door Insulation, White, 1st Floor, North Wing, Utility Closet	*SFP
071222-HG16c	Fire Door Insulation, White, 1st Floor, North Wing, Utility Closet	*SFP
071222-HG16d	Fire Door Insulation, White, Ground Floor, Chapel	*SFP
071222-HG18a	Grout, Grey, ceramic floor tile, 2nd Floor, Shower 1	None Detected
071222-HG18b	Grout, Grey, ceramic floor tile, 1st Floor, Bath 1	None Detected
071222-HG18c	Grout, Grey, ceramic floor tile, 1st Floor, Bath next to Room 31	None Detected
071222-HG20a	Grout, White, ceramic wall tile, 2nd Floor, Shower 1	None Detected
071222-HG20b	Grout, White, ceramic wall tile, 1st Floor, Bath 1	None Detected
071222-HG20c	Grout, White, ceramic wall tile, 1st Floor, North Shower	None Detected
071222-HG24a	Gypcrete, Grey, 2nd Floor, South End Corridors	None Detected
071222-HG24b	Gypcrete, Grey, 2nd Floor, North End Corridors	None Detected
071222-HG24c	Gypcrete, Grey, 2nd Floor, North End Corridors	None Detected
071222-HG25a	Pressboard, White, 2nd Floor, Room 4	60% Chrysotile
071222-HG25b	Pressboard, White, 1st Floor, Conference Room 1	*SFP

Notes:

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TABLE 11

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG25c	Pressboard, White, Ground Floor, Room 19	*SFP
071222-HG35a	Ceiling Tile, Grey, 2x4 regular, 1st Floor, Room 25	None Detected
071222-HG35b	Ceiling Tile, Grey, 2x4 regular, 1st Floor, Corridor	None Detected
071222-HG35c	Ceiling Tile, Grey, 2x4 regular, 1st Floor, Room 24	None Detected
071222-HG36a	Skim Coat, White, concrete beams, 1st Floor, South wing on N/S Beams	None Detected
071222-HG36b	Skim Coat, White, concrete beams, 1st Floor, South wing on N/S Beams	None Detected
071222-HG36c	Skim Coat, White, concrete beams, 1st Floor, South wing on N/S Beams	None Detected
071222-HG36d	Skim Coat, White, concrete beams, 1st Floor, South wing on N/S Beams	None Detected
071222-HG36e	Skim Coat, White, concrete beams, 1st Floor, South wing on N/S Beams	None Detected
071222-HG37a	Base Coat, off-white, concrete beams, 1st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37b	Base Coat, off-white, concrete beams, 1st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37c	Base Coat, off-white, concrete beams, 1st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37d	Base Coat, off-white, concrete beams, 1st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37e	Base Coat, off-white, concrete beams, 1st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG38a	Mortar, White, at glaze blocks, Ground Floor, PB0006, Mortar between Ceramic Blocks	None Detected
071222-HG38b	Mortar, White, at glaze blocks, Ground Floor, PB0005	None Detected
071222-HG38c	Mortar, White, at glaze blocks, Corridor Near PB0037	None Detected
071222-HG39a	Pipe insulation, White, Ground Level chapel	10% Amosite

Notes:

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TABLE 11

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG39b	Pipe insulation, White, Ground Level chapel	*SFP
071222-HG39c	Pipe insulation, White, Ground Level chapel	*SFP

RPF File 22.1049

Notes:

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TABLE 12

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG3a-A	9" Floor tile, Maroon, 2nd Floor, South Wing Hallway	24.7	7.6	60.9	6.8 Chrysotile
071222-HG3a-B	Mastic, Black, 2nd Floor, South Wing Hallway	20.8	0.0	79.2	None Detected
071222-HG3b-A	9" Floor tile, Maroon, 1st Floor, North Wing Hallway	-	-	-	*SFP
071222-HG3b-B	Mastic, Black, 1st Floor, North Wing Hallway	47.7	0.0	56.2	None Detected
071222-HG3c-A	9" Floor tile, Maroon, Ground Floor, PB0009	-	-	-	*SFP
071222-HG3c-B	Mastic, Black, Ground Floor, PB0009	57.3	0.0	42.7	None Detected
071222-HG4a-A	12" Floor tile, White, 1st Floor, North Wing Hallway	14.3	77.3	8.4	None Detected
071222-HG4a-B	Mastic, Yellow, 1st Floor, North Wing Hallway	72.9	0.0	27.1	None Detected
071222-HG4b-A	12" Floor tile, White, 1st Floor, North Wing Hallway	15.8	76.2	8.0	None Detected
071222-HG4b-B	Mastic, Yellow, 1st Floor, North Wing Hallway	59.1	0.0	40.9	None Detected
071222-HG4c-A	12" Floor tile, White, 1st Floor, North Wing Hallway	20.8	73.2	6.0	None Detected
071222-HG4c-B	Mastic, Yellow, 1st Floor, North Wing Hallway	49.1	0.0	50.9	None Detected
071222-HG5a-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	19.7	75.7	4.6	None Detected
071222-HG5a-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	22.6	0.0	77.4	None Detected

Notes:

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TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG5b-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	22.6	75.4	2.0	None Detected
071222-HG5b-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	31.9	0.0	68.1	None Detected
071222-HG5c-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	21.8	75.7	2.5	None Detected
071222-HG5c-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	36.7	0.0	63.3	None Detected
071222-HG6a	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (*inseparable mastic*)	18.4	79.6	2.0	None Detected
071222-HG6b	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (*inseparable mastic*)	17.8	80.4	1.8	None Detected
071222-HG6c	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (*inseparable mastic*)	20.7	77.5	1.8	None Detected
071222-HG7a	Carpet glue, Yellow, 2nd Floor, Room 69	25.6	0.0	74.4	None Detected
071222-HG7b	Carpet glue, Yellow, 2nd Floor, North Wing Corridor	55.8	0.0	44.2	None Detected
071222-HG7c	Carpet glue, Yellow, Ground Floor, Room 19	53.3	0.0	46.7	None Detected
071222-HG8a	Covebase adhesive, mixed, 2nd Floor, South Wing Hallway at Room 55	43.0	0.0	57.0	None Detected
071222-HG8b	Covebase adhesive, mixed, 1st Floor, Room 6A	85.3	0.0	14.7	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG8c	Covebase adhesive, mixed, 1st Floor, Room 25	73.1	0.0	26.9	None Detected
071222-HG9a	Caulk, White, interior doors, 2nd Floor, Center Stairwell Door	32.3	0.0	67.7	None Detected
071222-HG9b	Caulk, White, interior doors, 1st Floor, North Stair Door	31.8	0.0	68.2	None Detected
071222-HG9c	Caulk, White, interior doors, 1st Floor, Room 31	29.9	0.0	70.1	None Detected
071222-HG10a	Caulk, White, joint seams, 2nd Floor, Conference Room 4	31.6	0.0	68.4	None Detected
071222-HG10b	Caulk, White, joint seams, 1st Floor, Bath 1	38.2	0.0	61.8	None Detected
071222-HG10c	Caulk, White, joint seams, 1s Floor, Room 25	28.7	0.0	71.3	None Detected
071222-HG11a	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	9.2	0.0	90.8	1.8 Chrysotile
071222-HG11b	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	-	-	-	*SFP
071222-HG11c	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	-	-	-	*SFP
071222-HG17a	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	51.0	0.0	49.0	9.8 Chrysotile
071222-HG17b	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	-	-	-	*SFP
071222-HG17c	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	-	-	-	*SFP
071222-HG21a	Adhesive, White, ceramic wall tile, 2nd Floor, Shower 1	6.7	0.0	93.3	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG21b	Adhesive, White, ceramic wall tile, 1st Floor, Bath 1	26.3	0.0	73.7	None Detected
071222-HG21c	Adhesive, White, ceramic wall tile, 1st Floor, North Shower	36.2	0.0	63.8	None Detected
071222-HG22a	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (*inseparable mastic*)	38.8	0.0	59.4	1.8 Chrysotile
071222-HG22b	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (*inseparable mastic*)	-	-	-	*SFP
071222-HG22c	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (*inseparable mastic*)	-	-	-	*SFP
071222-HG23a	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (*inseparable mastic*)	33.7	0.0	53.3	13.3 Chrysotile
071222-HG23b	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (*inseparable mastic*)	-	-	-	*SFP
071222-HG23c	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (*inseparable mastic*)	-	-	-	*SFP
071222-HG26a-A	12" Floor Tile, Grey, Ground Floor, Room 21	25.1	64.6	10.3	None Detected
071222-HG26a-B	Adhesive, Yellow, Ground Floor, Room 21	98.3	0.0	1.7	None Detected
071222-HG26b-A	12" Floor Tile, Grey, Ground Floor, Room 21	27.4	63.5	9.1	None Detected
071222-HG26b-B	Adhesive, Yellow, Ground Floor, Room 21	58.0	0.0	42.0	None Detected
071222-HG26c-A	12" Floor Tile, Grey, Ground Floor, Room 21	26.4	64.0	9.6	None Detected
071222-HG26c-B	Adhesive, Yellow, Ground Floor, Room 21	58.0	0.0	42.0	None Detected
071222-HG27a	Sink basin undercoat, White, Ground Floor, Southeast Kitchen	28.9	0.0	71.1	None Detected
071222-HG27b	Sink basin undercoat, White, Ground Floor, Room 18	37.9	0.0	62.1	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG27c	Sink basin undercoat, White, Ground Floor, Room 27A	29.0	0.0	71.0	None Detected
071222-HG28a-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	16.5	80.4	3.3	None Detected
071222-HG28a-B	Adhesive, Yellow, Ground Floor, PB0002	94.3	0.0	5.7	None Detected
071222-HG28b-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	15.9	81.4	2.7	None Detected
071222-HG28b-B	Adhesive, Yellow, Ground Floor, PB0002	98.3	0.0	1.7	None Detected
071222-HG28c-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	17.1	80.4	2.5	None Detected
071222-HG28c-B	Adhesive, Yellow, Ground Floor, PB0002	95.2	0.0	4.8	None Detected
071222-HG29a-A	12" Floor Tile, Beige, Ground Floor, Southeast Kitchen	25.9	65.0	9.1	None Detected
071222-HG29a-B	Mastic, Black, Ground Floor, Southeast Kitchen	58.0	0.0	38.6	3.4 Chrysotile
071222-HG29b-A	12" Floor Tile, Beige, Ground Floor, Room 15	52.7	42.2	5.1	None Detected
071222-HG29b-B	Mastic, Black, Beige, Ground Floor, Room 15	-	-	-	*SFP
071222-HG29c-A	12" Floor Tile, Beige, Ground Floor, Center Corridor	94.3	3.3	2.4	None Detected
071222-HG29c-B	Mastic, Black, Ground Floor, Center Corridor	-	-	-	*SFP
071222-HG30a	Damp Proof Coating, Black, Ground Floor, Room 21A	78.3	0.0	21.7	None Detected
071222-HG30b	Damp Proof Coating, Black, Ground Floor, Room PB0006	76.9	0.0	23.1	None Detected

Notes:

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TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG30c	Damp Proof Coating, Black, Ground Floor, Room PB0006	75.5	0.0	24.5	None Detected
071222-HG31a	Caulk, White, Exterior at Door	34.7	0.0	65.3	None Detected
071222-HG31b	Caulk, White, Exterior at Window	26.9	0.0	73.1	None Detected
071222-HG31c	Caulk, White, Exterior at Window	11.7	0.0	88.3	None Detected
071222-HG32a-A	Stair Tread Floor Tile, Black, Center Stair, Top of the Landing	29.9	0.0	64.5	5.6 Chrysotile
071222-HG32a-B	Mastic, Black, Center Stair, Top of the Landing	60.3	0.0	37.7	2.0 Chrysotile
071222-HG32b-A	Stair Tread Floor Tile, Black, South Stair	-	-	-	*SFP
071222-HG32b-B	Mastic, Black, South Stair	-	-	-	*SFP
071222-HG32c-A	Stair Tread Floor Tile, Black, North Stair	-	-	-	*SFP
071222-HG32c-B	Mastic, Black, North Stair	-	-	-	*SFP
071222-HG33a	Glaze, White, exterior windows	14.3	81.7	4.0	None Detected
071222-HG33b	Glaze, White, exterior windows	15.4	82.0	2.6	None Detected
071222-HG33c	Glaze, White, exterior windows	20.3	75.7	4.0	None Detected
071222-HG34a	Sink Basin Undercoat, Black, Standard basin sinks, 2nd Floor, South Nurses	19.2	0.0	75.9	4.9 Chrysotile
071222-HG34b	Sink Basin Undercoat, Black, Standard basin sinks, 1st Floor, North Nurse, Kitchenette	-	-	-	*SFP

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG34c	Sink Basin Undercoat, Black, Standard basin sinks, 1st Floor, South Nurses	-	-	-	*SFP
071222-HG40a	Fire stop caulk, Red, Ground Level, PB006	58.8	0.0	41.2	None Detected
071222-HG40b	Fire stop caulk, Red, Corridor at PB036	58.9	0.0	41.1	None Detected
071222-HG40c	Fire stop caulk, Red, PB010	59.4	0.0	40.0	None Detected

22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

APPENDIX B

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Kate Corey

Lab Order ID: 71995515
Analysis ID: 71995515_PBP
Date Received: 6/29/2022
Date Reported: 7/1/2022

Project: 22.1049 Harriman Green Barn Bangor, ME 062122

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
062122-PC101 71995515PBP_1	White paint, north side of building on wood siging	0.0816	6000	**0.60%**
062122-PC102 71995515PBP_2	White aint on door on north side of building	0.0733	28000	**2.8%**
062122-PC103 71995515PBP_3	Light green paint on wood siding on north side of building	0.0558	4100	**0.41%**
062122-PC104 71995515PBP_4	Dark green paint on wood siding on north side of building	0.0878	120000	**12%**

Matthew Caffey (4)

Analyst

Laboratory Director

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 719 95515
Client Code: _____

Contact Information	
Company Name:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Kate Corey
Phone ☐:	
Fax ☐:	
Email ☑:	kate@airpf.com
PO Number:	
Project Name/Number:	22.1049 Harriman Green Barn Bangor, ME 062122

Billing/Invoice Information	
Company:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Katie Betts-Levine
Phone ☐:	
Fax ☐:	
Email ☑:	katie@airpf.com

Lead Test Types		
Paint Chips by Flame AA (PBP) ☑	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	22.1049 Harriman Green Barn Bangor, ME 062122

Turn Around Times			
3 Hours	☐	72 Hours	☐
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☑		

Sample ID #	Description/Location	Volume/Area	Comments
062122-PC101	White Paint, North Side of Building on Wood Siding		
062122-PC102	White Paint on Door on North Side of Building		
062122-PC103	Light Green Paint on Wood Siding on North Side of Building		
062122-PC104	Dark Green Paint on Wood Siding on North Side of Building		

Accepted ☑
Rejected ☐

Total Number of Samples 4

Relinquished by	Date/Time	Received by	Date/Time
Kate Corey K Corey	06/28/22 1330	A. RA 6/29 10:	30am

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman-Dix IF&W

Lab Order ID: 71998224
Analysis ID: 71998224_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
080122-PC1 71998224PBP_1	White, basement window sill	0.0571	2000	**0.20%**
080122-PC2 71998224PBP_2	Light blue, basement northeast room wall	0.0895	45	**0.0045%**
080122-PC3 71998224PBP_3	White, basement ceiling	0.0652	320	**0.032%**
080122-PC4 71998224PBP_4	White/offwhite, basement wall	0.0566	1200	**0.12%**
080122-PC5 71998224PBP_5	light blue/offwhite, 3rd floor northwest corner room wall	0.0701	1500	**0.15%**
080122-PC6 71998224PBP_6	green, 3rd floor hallway door/radiator	0.1028	970	**0.097%**
080122-PC7 71998224PBP_7	brown, 2nd floor hallway door/radiator	0.0988	610	**0.061%**
080122-PC8 71998224PBP_8	tan, 2nd floor Room 228 wall/sill	0.0721	< 55	**< 0.0055%**
080122-PC9 71998224PBP_9	white, exterior window trim	0.0776	6500	**0.65%**
080122-PC10 71998224PBP_10	white, exterior window sash	0.0564	140	**0.014%**

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb). Unless indicated, areas and volumes were provided by the customer.

Xaviera Watkins (10)
Analyst

Laboratory Director

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 71998224
Client Code: _____

Contact Information	
Company Name:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Allan Mercier
Phone ☐:	
Fax ☐:	
Email ☑:	allan@airpf.com
PO Number:	
Project Name/Number:	22.1049 Harriman-Dix IF&W

Billing/Invoice Information	
Company:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Katie Betts-Levine
Phone ☐:	
Fax ☐:	
Email ☑:	katie@airpf.com

Lead Test Types		
Paint Chips by Flame AA (PBP) ☑	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	22.1049 Harriman-Dix IF&W

Turn Around Times			
3 Hours	☐	72 Hours	☑
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Sample ID #	Description/Location	Volume/Area	Comments
080122-PC1	White, basement window sill		
080122-PC2	Light blue, basement northeast room wall		
080122-PC3	White, basement ceiling		
080122-PC4	White/offwhite, basement wall		
080122-PC5	light blue/offwhite, 3rd floor northwest corner room wall		
080122-PC6	green, 3rd floor hallway door/radiator		
080122-PC7	brown, 2nd floor hallway door/radiator		
080122-PC8	tan, 2nd floor Room 228 wall/sill		
080122-PC9	white, exterior window trim		
080122-PC10	white, exterior window sash		
			Accepted ☑
			Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
	8/1/22		8/5 10:30AM

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Dix, New Pooler

Lab Order ID: 71998226
Analysis ID: 71998226_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
080122-PC1 71998226PBP_1	White, 1st floor north day room wall	0.0745	< 54	**< 0.0054%**
080122-PC2 71998226PBP_2	Yellow, 1st floor north corridor wall	0.0832	< 48	**< 0.0048%**
080122-PC3 71998226PBP_3	White/Green, 1st floor north room window sill	0.0630	710	**0.071%**
080122-PC4 71998226PBP_4	Red, 2nd floor stair riser	0.0934	28000	**2.8%**
080122-PC5 71998226PBP_5	Beige, 2nd floor, Room 108 Door Trim	0.0621	< 64	**< 0.0064%**
080122-PC6 71998226PBP_6	Blue/Offwhite, 2nd floor Room 104, wall	0.0716	< 56	**< 0.0056%**
080122-PC7 71998226PBP_7	Beige, 2nd floor, Shower Room Ceiling	0.0575	180	**0.018%**
080122-PC8 71998226PBP_8	Beige/Green, 2nd floor lobby	0.0954	< 42	**< 0.0042%**
080122-PC9 71998226PBP_9	Blue/Beige, basement Room PB0058 wall	0.0795	< 50.	**< 0.0050%**
080122-PC10 71998226PBP_10	Light Green, Basement Generator Room Wall	0.1006	770	**0.077%**

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Xaviera Watkins (11)
Analyst

Laboratory Director

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Dix, New Pooler

Lab Order ID: 71998226
Analysis ID: 71998226_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
080122-PC11	Green, Basement Corridor Doors	0.0794	130	**0.013%**
71998226PBP_11				

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Xaviera Watkins (11)

Analyst

Laboratory Director

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www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 71998226
Client Code: _____

Contact Information	
Company Name:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Allan Mercier
Phone ☐:	
Fax ☐:	
Email ☑:	allan@airpf.com
PO Number:	
Project Name/Number:	22.1049 Harriman Dix, New Pooler

Billing/Invoice Information	
Company:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Katie Betts-Levine
Phone ☐:	
Fax ☐:	
Email ☑:	katie@airpf.com

Lead Test Types		
Paint Chips by Flame AA (PBP) ☑	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	22.1049 Harriman Dix, New Pooler

Turn Around Times			
3 Hours	☐	72 Hours	☑
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Sample ID #	Description/Location	Volume/Area	Comments
080122-PC1	White, 1st floor north day room wall		
080122-PC2	Yellow, 1st floor north corridor wall		
080122-PC3	White/Green, 1st floor north room window sill		
080122-PC4	Red, 2nd floor stair riser		
080122-PC5	Beige, 2nd floor, Room 108 Door Trim		
080122-PC6	Blue/Offwhite, 2nd floor Room 104, wall		
080122-PC7	Beige, 2nd floor, Shower Room Ceiling		
080122-PC8	Beige/Green, 2nd floor lobby		
080122-PC9	Blue/Beige, basement Room PB0058 wall		
080122-PC10	Light Green, Basemnet Generator Room Wall		
080122-PC11	Green, Basement Corridor Doors		
			Accepted ☑
			Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
	8/4/22		8/5. 10:30AM

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Dix - Old Pooler

Lab Order ID: 71998220
Analysis ID: 71998220_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
080122-PC1 71998220PBP_1	Red, Exterior door	0.0737	2900	**0.29%**
080122-PC2 71998220PBP_2	White, Exterior on window trim/sash	0.0596	70000	**7.0%**
080122-PC3 71998220PBP_3	Green/REd, 2nd floor stairwell door	0.0549	130	**0.013%**
080122-PC4 71998220PBP_4	Offwhite, 2nd floor Room 53 wall	0.1079	270	**0.027%**
080122-PC5 71998220PBP_5	Peach, 2nd floor Room 59B	0.1044	39	**0.0039%**
080122-PC6 71998220PBP_6	White, 2nd loor room 63 wall	0.0905	140	**0.014%**
080122-PC7 71998220PBP_7	Offwhite, south stairwell window sill	0.0673	3000	**0.30%**
080122-PC8 71998220PBP_8	Light Blue, 1st Floor, South Nurse Station Wall	0.0656	< 61	**< 0.0061%**
080122-PC9 71998220PBP_9	Light Blue/Green/Yellow, 1st floor South Nurse Station Ext Wall	0.0898	1200	**0.12%**
080122-PC10 71998220PBP_10	Green, 1st floor, North Nurse Station Wall	0.0830	2100	**0.21%**

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb). Unless indicated, areas and volumes were provided by the customer.

Athena Summa (12)

Analyst

Laboratory Director

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Dix - Old Pooler

Lab Order ID: 71998220
Analysis ID: 71998220_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
080122-PC11 71998220PBP_11	Orange, 1st floor Corridor	0.0660	< 61	**< 0.0061%**
080122-PC12 71998220PBP_12	Green/Tan, Basement Door Trim	0.0725	5800	**0.58%**

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Athena Summa (12)

Analyst

Laboratory Director

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 71948220
Client Code: _____

Contact Information
Company Name: RPF Environmental
Address: 320 1st NH Turnpike
Northwood, NH 03261
Contact: Allan Mercier
Phone ☐:
Fax ☐:
Email ☑: allan@airpf.com
PO Number:
Project Name/Number: 22.1049 Harriman Dix - Old Pooler

Billing/Invoice Information
Company: RPF Environmental
Address: 320 1st NH Turnpike
Northwood, NH 03261
Contact: Katie Betts-Levine
Phone ☐:
Fax ☐:
Email ☑: katie@airpf.com

Lead Test Types		
Paint Chips by Flame AA (PBP) ☑	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	22.1049 Harriman Dix - Old Pooler

Turn Around Times			
3 Hours	☐	72 Hours	☑
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Sample ID #	Description/Location	Volume/Area	Comments
080122-PC1	Red, Exterior door		
080122-PC2	White, Exterior on window trim/sash		
080122-PC3	Green/REd, 2nd floor stairwell door		
080122-PC4	Offwhite, 2nd floor Room 53 wall		
080122-PC5	Peach, 2nd floor Room 59B wall		
080122-PC6	White, 2nd floor Room 63 Wall		
080122-PC7	Offwhite, south stairwell window sill		
080122-PC8	Light Blue, 1st Floor, South Nurse Station Wall		
080122-PC9	Light Blue/Green/Yellow, 1st floor South Nurse Station Ext Wall		
080122-PC10	Green, 1st floor, North Nurse Station Wall		
080122-PC11	Orange, 1st floor Corridor		
080122-PC12	Green/Tan, Basement Door Trim		
			Accepted ☑
			Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
	8/9/22		8/5 10:30AM

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Building F

Lab Order ID: **10006408**
Analysis: PBP
Date Received: 09/19/2022
Date Reported: 09/22/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass (g)	Concentration (ppm)	Concentration (% by weight)
091522-PC1 *10006408_0001*	**Paint, tan, 2nd floor office, sill**	0.0516	200	**0.020%**
091522-PC2 *10006408_0002*	**Paint, green, 2nd floor corridor wall**	0.0783	370	**0.037%**
091522-PC3 *10006408_0003*	**Paint, beige, 2nd floor office wall**	0.1191	3200	**0.32%**
091522-PC4 *10006408_0004*	**Paint, white, 2nd floor office, window trough**	0.0907	2700	**0.27%**
091522-PC5 *10006408_0005*	**Paint, light pink, 2nd floor door in "L" wing**	0.0690	3600	**0.36%**
091522-PC6 *10006408_0006*	**Paint, pink, 2nd floor "L" wing**	0.0520	180000	**18%**
091522-PC7 *10006408_0007*	**Paint, off-white, 2nd floor "L" wing wall**	0.1319	150000	**15%**
091522-PC8 *10006408_0008*	**Paint, Blue/Multi, 1st floor center room on right**	0.0636	11000	**1.1%**

Matthew Caffey (14)
Analyst

Approved Signatory

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman Building F

Lab Order ID: **10006408**
Analysis: PBP
Date Received: 09/19/2022
Date Reported: 09/22/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass (g)	Concentration (ppm)	Concentration (% by weight)
091522-PC9 *10006408_0009*	**Paint, green, 1st floor center room on left**	0.0955	140	**0.014%**
091522-PC10 *10006408_0010*	**Paint, white, 1st floor "L" wing on window sill**	0.1081	1300	**0.13%**
091522-PC11 *10006408_0011*	**Paint, white, basement window sill**	0.0658	3300	**0.33%**
091522-PC12 *10006408_0012*	**Paint, white, basement wall**	0.0868	<46	**<0.0046%**
091522-PC13 *10006408_0013*	**Paint, green/beige, stairwell to Attic wall**	0.1210	240000	**24%**
091522-PC14 *10006408_0014*	**Paint, beige, Attic wall**	0.1104	150000	**15%**

Matthew Caffey (14)
Analyst

Approved Signatory

100106408

Client:	RPF Environmental, Inc.	***Instructions:**	**Scientific Analytical Institute, Inc.**
Contact:	Allan Mercier	*Use Column "B" for your contact info*	
Address:	320 2nd NH Turnpike, Northwood, NH. 03261		**302-L Pomona Dr.**
Phone:	(603) 942-5432	*To See an Example Click the bottom Example Tab.*	**Greensboro, NC 27407**
Fax:	(603) 942-5300		**Phone: 336.292.3888**
Email:	allan@airpf.com	***Enter samples between "<<" and ">>"***	**Fax: 336.292.3313**
Project:	22.1049 Harriman Building F	***Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***	**Email: lab@sailab.com**
Client Notes:		*Only Enter your data on the first sheet "Sheet1"*	
P.O. #.		*Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.*	
Date Submitted:			
Analysis:	Lead by Flame AA		
TurnAroundTime:	72 HR		

<<

091522-PC1	Paint, tan, 2nd floor office, sill
091522-PC2	Paint, green, 2nd floor corridor wall
091522-PC3	Paint, beige, 2nd floor office wall
091522-PC4	Paint, white, 2nd floor office, window trough
091522-PC5	Paint, light pink, 2nd floor door in "L" wing
091522-PC6	Paint, pink, 2nd floor "L" wing
091522-PC7	Paint, off-white, 2nd floor "L" wing wall
091522-PC8	Paint, Blue/Multi, 1st floor center room on right
091522-PC9	Paint, green, 1st floor center room on left
091522-PC10	Paint, white, 1st floor "L" wing on window sill
091522-PC11	Paint, white, basement window sill
091522-PC12	Paint, white, basement wall
091522-PC13	Paint, green/beige, stairwell to Attic wall
091522-PC14	Paint, beige, Attic wall

>>

9/16/22

John 9/19 10:30am

Accepted ☑

Rejected ☐

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 22.1049 Harriman-Dix Bldg H

Lab Order ID: 71998218
Analysis ID: 71998218_PBP
Date Received: 8/5/2022
Date Reported: 8/10/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
072522-PC1 71998218PBP_1	White, 4th floor janitor closet wall	0.0822	< 49	**< 0.0049%**
072522-PC2 71998218PBP_2	Offwhite, 4th floor Rm 101 sill	0.0377	250	**0.025%**
072522-PC3 71998218PBP_3	white, 5th floor Rm 101 trough	0.0689	24000	**2.4%**
072522-PC4 71998218PBP_4	Green, 4th floor, Room 94 wall	0.0875	220000	**22%**
072522-PC5 71998218PBP_5	Grey, 4th floor, men's bathroom wall	0.0878	330	**0.033%**
072522-PC6 71998218PBP_6	Green, 2nd floor, hallway wall	0.0680	120000	**12%**
072522-PC7 71998218PBP_7	Blue, 2nd floor, plaster wall at elevator	0.0654	4600	**0.46%**
072522-PC8 71998218PBP_8	Brown, 2nd floor, corridor window sill	0.0709	140	**0.014%**
072522-PC9 71998218PBP_9	Green/white, basement records wall	0.0547	630	**0.063%**
072522-PC10 71998218PBP_10	Brown/Yellow/Red, basement records floor	0.1042	150	**0.015%**

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Xaviera Watkins (10)

Analyst

Laboratory Director

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 71998218
Client Code: _____

Contact Information	
Company Name:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Allan Mercier
Phone ☐:	
Fax ☐:	
Email ☑:	allan@airpf.com
PO Number:	
Project Name/Number:	22.1049 HARRIMAN-DIX Bldg H

Billing/Invoice Information	
Company:	RPF Environmental
Address:	320 1st NH Turnpike
	Northwood, NH 03261
Contact:	Katie Betts-Levine
Phone ☐:	
Fax ☐:	
Email ☑:	katie@airpf.com

Turn Around Times			
3 Hours	☐	72 Hours	☑
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Lead Test Types		
Paint Chips by Flame AA (PBP) ☑	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	

Sample ID #	Description/Location	Volume/Area	Comments
072522-PC1	White, 4th floor janitor closet wall		
072522-PC2	Offwhite, 4th floor Rm 101 sill		
072522-PC3	white, 5th floor Rm 101 trough		
072522-PC4	Green, 4th floor, Room 94 wall		
072522-PC5	Grey, 4th floor, men's bathroom wall		
072522-PC6	Green, 2nd floor, hallway wall		
072522-PC7	Blue, 2nd floor, plaster wall at elevator		
072522-PC8	Brown, 2nd floor, corridor window sill		
072522-PC9	Green/white, basement records wall		
072522-PC10	Brown/Yellow/Red, basement records floor		
			Accepted ☑
			Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
	8/9/22		8:15 10:30AM

APPENDIX C

State of Maine
Asbestos Abatement Program

Allan D. Mercier

Air Monitor

Cert 1: AM-0465
Trn.Exp.Date 01/13/2023

Air Analyst

Cert 2: AA-0392
Trn.2.Exp.Date01/13/2023

Expiration Date 01 31 2023

This is not a legal form of official identification

State of Maine
Asbestos Abatement Program

Allan D. Mercier

Inspector

Cert No. AI-0526
Trn.Exp.Date 01/14/2023

Expiration Date **01/31/2023**

This is not a legal form of official identification

RPF ENVIRONMENTAL, INC.

320 First NH Turnpike, Northwood, NH 03261 (603) 942-5432
Class Location: Northwood, NH

This is to certify that

Allan Mercier

has completed the requisite training and
has passed an examination for accreditation as:

Asbestos Inspector - Annual Refresher
Pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

January 14, 2022
Course Date

January 14, 2022
Examination Date

January 14, 2023
Expiration Date

22.0942 – 04 – 04/20/73
Certificate Number/DOB

Brianna Ham, Instructor

State of Maine
Asbestos Abatement Program

Kenneth R. Arsenault

Air Monitor

Cert 1: AM-0653
Trn.Exp.Date 01/13/2023

Air Analyst

Cert 2: AA-0542
Trn.2.Exp.Date01/13/2023

Expiration Date 01/31/2023

This is not a legal form of official identification

State of Maine
Asbestos Abatement Program

Kenneth R. Arsenault

Inspector

Cert No. AI-0848
Trn.Exp.Date 01/14/2023

Expiration Date 01/31/2023

This is not a legal form of official identification

RPF ENVIRONMENTAL, INC.

320 First NH Turnpike, Northwood, NH 03261 (603) 942-5432
Class Location: Northwood, NH

This is to certify that

Kara Forsythe

has completed the requisite training and
has passed an examination for accreditation as:

Asbestos Inspector - Annual Refresher
Pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

January 14, 2022
Course Date

January 14, 2022
Examination Date

January 14, 2023
Expiration Date

22.0942 – 01 – 10/19/78
Certificate Number/DOB

Brianna Ham, Instructor

STATE of NEW HAMPSHIRE
Department of Environmental Services
Asbestos Management & Control Program

ASBESTOS INSPECTOR
AI101706 R
KATHERINE C COREY DOB: 4/27/1997
EFF. Date: 5/26/2022 EXP. Date: 5/25/2023

Air Resources Division Director
Craig A. Wright

Craig A Wright

RPF ENVIRONMENTAL, INC.

320 First NH Turnpike, Northwood, NH 03261 (603) 942-5432
Class Location: Northwood, NH

This is to certify that

Katherine Corey

has completed the requisite training and
has passed an examination for accreditation as:

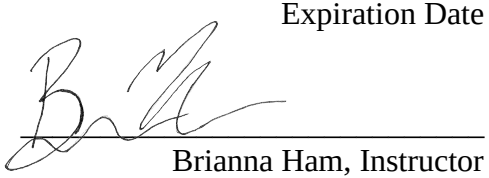
Asbestos Inspector - Annual Refresher
Pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

January 14, 2022
Course Date

January 14, 2022
Examination Date

January 14, 2023
Expiration Date

22.0942 – 02 – 04/27/97
Certificate Number/DOB



Brianna Ham, Instructor

APPENDIX D

LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.

2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACBM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.

3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.

4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.

5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm^2 be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.

6. Air testing is to be considered a "snap shot" of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.

7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.

8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.

9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.

10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client's Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client's Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.

11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client's abatement contractor as applicable, was responsible for performing visual inspections

of the work area to determine completeness of work prior to air clearance testing by RPF.

12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.

13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.

14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.

15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.

16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.

17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.

18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.

Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements. Sampling methodologies used are as set forth in 40 CFR Part 763 (EPA):

- Surfacing Material: 3 bulk samples from each homogenous area and/or material that is 1,000 square feet or less. 5 bulk samples from each homogenous area that is greater than 1,000 square feet but less than or equal to 5000 square feet. 7 bulk samples from each homogenous area that is greater than 5,000 square feet.
- Thermal System Insulation: 3 bulk samples from each homogenous area. 1 bulk sample from each homogenous area of patched thermal system insulation if the patched section is less than 6 linear or square feet. Samples sufficient to determine whether the material is ACM from each insulated mechanical system where cement is utilized on tees, elbows, or valves.
- Miscellaneous ACM: 3 samples from each miscellaneous material. 1 sample if the amount of miscellaneous material is less than 6 square or linear feet.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a “stop at first positive” (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

Summary of Methodology: Lead in Paint Survey

Screening for lead in paint (LP) was performed using bulk sampling of paint or using an X-Ray Fluorescence (XRF) meter for in situ measurements of various painted surfaces. For bulk sampling, samples for determinations were collected by scraping lead paint chips from the substrate. The surveyor attempted to sample layers of paint down to the substrate surface at each sample location. Samples were placed into proper sample containers, the containers were then sealed, labeled and shipped with chain of custody to the RPF AIHA accredited vendor laboratory. The samples were analyzed for total lead content using SW 846 3050B - NIOSH Method 7420. For XRF screening, the device was used and calibrated in accordance with the equipment and industry guidelines applicable for the specific testing performed.

Unless specific TCLP waste characterizations were included in the RPF Scope of Work (SOW), further analysis of waste streams for toxicity characteristics including, but not necessarily limited to lead, may be required prior to disposal of the waste stream. Other toxics may also be present including other heavy metals and PCBs and it may also be necessary to conduct waste characterization for these materials.

Sampling was limited to the specific components as listed in the RPF Report and testing and survey was not completed on every different surface in every room or area in the building. In addition unless otherwise noted in the RPF Report, surface dust, air and soil testing were not conducted during this survey. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing and air monitoring throughout the building, LBP testing of all surfaces in the building, and representative soil testing in the exterior areas should be completed. This type of testing and analysis was beyond the SOW for the initial survey

The intent of this survey is for lead in construction purposes, not for lead abatement, lead inspections, or lead hazard assessments in residential situations. Specific survey and inspection protocols are required for residential lead-based paint inspections that were not included in the RPF SOW.

RPF followed applicable industry standards for construction related identification in nonresidential settings; however, RPF does not warrant or certify that all lead or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to inspect of sample, assumptions regarding the determination of homogenous or like types of paint, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar appearing material. Also reference the Limitations document attached to the report.

Summary of Methodology: Polychlorinated Biphenyls, Mercury and Refrigerants

Various, accessible fluorescent light fixtures were inspected to determine if the ballasts contain a "No PCBs" label. Ballasts that do not have the "No PCBs" label are assumed to contain PCB.

Only limited fixtures were checked based on accessibility and safety concerns. Further inspection will be required during the course of construction, maintenance, renovation and demolition.

Various equipment and machinery within the building may also contain PCB oils. Specific findings relating to such equipment and machinery were not included in the RPF SOW.

It is common to find fluorescent light bulbs, thermostats and switches are present in buildings. RPF performed a visual inspection of specific areas included in the RPF SOW in an attempt to identify such materials. Findings are limited to the specific accessible space accessed by RPF.

Various compressor and refrigerant equipment may be present and is should be assumed that such equipment contains Freon or other chlorofluorocarbons unless otherwise tested or documented. Although general comment may be provided in the RPF Report, the specific identification of all potential Freon and CFCs is not included in the RPF SOW.

The findings may or may not be fully representative of all of the entire building. Confirmation testing and analysis of PCB, refrigerants and mercury was not included in the RPF SOW.

RPF followed applicable industry standards; however, RPF does not warrant or certify that all hazardous material in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, electrical safety considerations, and assumptions relating to areas or material being representative of other locations which in fact may not be representative. Also reference the Limitations document attached to the report.

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