

**PROJECT SPECIFICATIONS
FOR
ABATEMENT AND DEMOLITION
OF THE FORMER FORSTER MILL
581 DEPOT STREET
WILTON, MAINE**

Prepared for:

**TOWN OF WILTON
158 WELD ROAD
WILTON, MAINE**

Prepared by:

**RANSOM CONSULTING, INC.
400 COMMERCIAL STREET, SUITE 404
PORTLAND, MAINE 04101**

Ransom Project # 161.06104

October 2017

**PROJECT SPECIFICATIONS
ABATEMENT AND DEMOLITION OF THE FORMER FORSTER MILL
581 DEPOT STREET, WILTON, MAINE**

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DOCUMENT 000101 - PROJECT TITLE PAGE

1.1 PROJECT MANUAL VOLUME I

- A. **Project Name:** Abatement and Demolition of the Former Forster Mill
- B. **Project Location:** 581 Depot Street, Wilton, Maine
- C. **Owner:** Town of Wilton, Maine
- D. **Owner Contact:** Rhonda Irish, Town Manager
158 Weld Road, Wilton, Maine
(207) 645-4961, manager@wiltonmaine.org
- E. **Engineer:** Ransom Consulting, Inc.
- F. **Engineer Contact:** Jaime Madore, P.E. or Nicholas Sabatine, P.G.
400 Commercial Street, Suite 404, Portland, Maine
(207) 772-2891
jaime.madore@ransomenv.com, nsabatine@ransomenv.com
- G. **Engineer Project #:** 161.06104
- H. **Issued:** October 2017 – For Bid

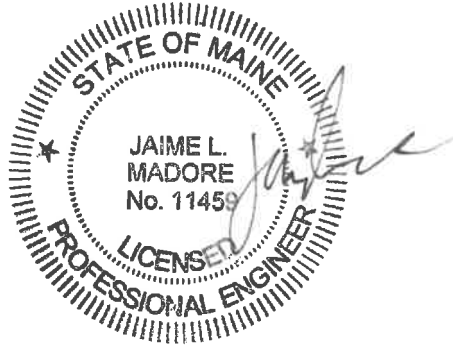
END OF DOCUMENT 000101

DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Environmental Engineer:

1. Jaime Madore, P.E., Ransom Consulting, Inc.
2. Maine License #11459
3. Seal:



END OF DOCUMENT 000107

DOCUMENT 000115 - LIST OF DRAWING SHEETS

1.1 LIST OF DRAWINGS

- A. Drawings: Drawings consist of the Contract Drawings listed on the Table of Contents page of the separately bound drawing set titled **Abatement and Demolition of the Former Forster Mill**, dated September 29, 2017, as modified by subsequent Addenda and Contract modifications.
- B. List of Drawings: Drawings consist of the following Contract Drawings:

Page	Sheet	Description
1	-	Cover Sheet
2	C1.0	Demolition Plan
3	C2.0	Erosion Control Details and general notes.

END OF DOCUMENT 000115

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

- A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements. An example copy of this document is bound into this Project Manual.

END OF DOCUMENT 002113

DOCUMENT 002213 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, GENERAL

- A. The following supplements modify Section 002113 “Instructions to Bidders” and AIA Document A701, "Instructions to Bidders." Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, unaltered portions of the Instructions to Bidders shall remain in effect.
- B. Copies of AIA standard forms may be obtained from The American Institute of Architects; www.aia.org/contractdocs/purchase/index.htm; email: docspurchases@aia.org; (800) 942-7732. Select representative AIA forms have been attached to this Project Manual.

1.2 ARTICLE 1 - DEFINITIONS

- A. Bidder - One who submits a Bid directly to Owner as distinct from a sub-bidder, who submits a bid to a Bidder.
- B. Successful Bidder - The lowest, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.
- C. Owner - The Owner of the project site is the Town of Wilton, 158 Weld Rd, Wilton, Maine 04294.
- D. Engineer - The Engineer contracted by the Owner is Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.

1.3 ARTICLE 2 - BIDDER'S REPRESENTATIONS

- A. Add Section 2.1.3.1:
 - 1. 2.1.3.1 - The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.
- B. Add Section 2.1.5:
 - 1. 2.1.5 - The Bidder is a properly licensed Contractor according to the laws and regulations of the State of Maine and meets qualifications indicated in the Procurement and Contracting Documents.
- C. Add Section 2.1.6:
 - 1. 2.1.6 - The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.

1.4 ARTICLE 3 - BIDDING DOCUMENTS

A. 3.2 - Interpretation or Correction of Procurement and Contracting Documents:

1. Add Section 3.2.2.1:

- a. 3.2.2.1 - Submit Bidder's Requests for Interpretation via written letter or email to: Jaime Madore, P.E., Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine 04101, (207) 772-2891, jaime.madore@ransomenv.com. Requests shall be accepted up to two days (48 hours) prior to the receipt of bids.

B. 3.4 - Addenda:

1. Delete Section 3.4.3 and replace with the following:

- a. 3.4.3 - Addenda may be issued up to 1 day (24 hours) prior to the receipt of bids.

2. Add Section 3.4.4.1:

- a. 3.4.4.1 - Owner may elect to waive the requirement for acknowledging receipt of 3.4.4 Addenda as follows:
 - 1) 3.4.4.1.1 - Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
 - 2) 3.4.4.1.2 - Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

1.5 ARTICLE 4 - BIDDING PROCEDURES

A. 4.1 - Preparation of Bids:

1. Add Section 4.1.1.1:

- a. 4.1.1.1 - Printable electronic Bid Forms and related documents are available from Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine 04101, C/O Ms. Jaime Madore, (207) 772-2891, Jaime.madore@ransomenv.com.

2. Add Section 4.1.8:

- a. 4.1.8 - The Bid shall include unit prices when called for by the Procurement and Contracting Documents. Owner may elect to consider unit prices in the determination of award. Unit prices will be incorporated into the Contract.

3. Add Section 4.1.9:

- a. 4.1.9 - Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to

complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

4. Add Section 4.1.10:

- a. 4.1.10 - Bids shall include sales and use taxes. Contractors shall show separately with each monthly payment application the sales and use taxes paid by them and their subcontractors in the form indicated. Reimbursement of sales and use taxes, if any, shall be applied for by Owner for the sole benefit of Owner.

B. 4.3 - Submission of Bids:

1. Add Section 4.3.1.2:

- a. 4.3.1.2 - Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.

C. 4.4 - Modification or Withdrawal of Bids:

1. Add the following sections to 4.4.2:

- a. 4.4.2.1 - Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.
- b. 4.4.2.2 - Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the Bid.

D. 4.5 - Break-Out Pricing Bid Supplement:

1. Add Section 4.5:

- a. 4.5 - Provide detailed cost breakdowns no later than two business days following Engineer's request.

E. 4.6 - Subcontractors, Suppliers, and Manufacturers List Bid Supplement:

1. Add Section 4.6:

- a. 4.6 - Provide list of major subcontractors, suppliers, and manufacturers furnishing or installing products no later than two business days following Engineer's request.

Include those subcontractors, suppliers, and manufacturers providing work totaling three percent or more of the Bid amount. Do not change subcontractors, suppliers, and manufacturers from those submitted without approval of Engineer.

1.6 ARTICLE 5 - CONSIDERATION OF BIDS

A. 5.2 - Rejection of Bids:

1. Add Section 5.2.1:

- a. 5.2.1 - Owner reserves the right to reject a bid based on Owner's and Engineer's evaluation of qualification information submitted following opening of bids. Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

1.7 ARTICLE 6 - POSTBID INFORMATION

A. 6.1 - Contractor's Qualification Statement:

1. Add Section 6.1.1:

- a. 6.1.1 - Submit Contractor's Qualification Statement no later than two business days following Engineer's request.

B. 6.3 - Submittals:

1. Add Section 6.3.1.4:

- a. 6.3.1.4 - Submit information requested in Sections 6.3.1.1, 6.3.1.2, and 6.3.1.3 no later than two business days following Engineer's request.

1.8 ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 - Bond Requirements:

1. Add Section 7.1.1.1:

- a. 7.1.1.1 - Both a Performance Bond and a Payment Bond will be required, each in an amount equal to 100 percent of the Contract Sum.

B. 7.2 - Time of Delivery and Form of Bonds:

1. Delete the first sentence of Section 7.2.1 and insert the following:

Ransom Consulting, Inc.

Abatement and Demolition of the Former Forster Mill

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

- a. The Bidder shall deliver the required bonds to Owner no later than ten days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.
2. Delete Section 7.2.3 and insert the following:
 - a. 7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract.

1.9 ARTICLE 9 - EXECUTION OF THE CONTRACT

A. Add Article 9:

1. 9.1.1 - Subsequent to the Notice of Intent to Award, and within ten days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner through the Engineer, in such number of counterparts as Owner may require.
2. 9.1.2 - Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.
3. 9.1.3 - Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement.
4. 9.1.4 - In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

1.10 ADDITIONAL OWNER REQUIREMENTS

- A. The Contractor shall make every effort to comply with the ASTM Standard Guide for Greener Cleanups (ASTM E2893-13, 2013, "Standard Guide for Greener Cleanups," ASTM International, West Conshohocken, PA, 2013, DOI: 10.1520/E2893, www.astm.org). The Contractor shall become familiar with, and shall incorporate the U.S. EPA Principles for Greener Cleanups into their remediation plan. See copy of this document, attached.
- B. All work performed on this project must comply with the Davis-Bacon Act (DBA).
 1. All onsite laborers and mechanics employed by the Contractors and Subcontractors shall be paid wages at rates not less than those prevailing on similar construction as determined by the Secretary of Labor for the United States. For this project the selected Contractor shall meet the Heavy Construction wage rate determination attached in this section.
 2. Contractors shall submit weekly certified time sheets/payroll report form WH-347 for all hours of work on the project.
 3. Employee wage rate interviews shall be conducted by the Engineer.
 4. The most recent wage determinations for Davis-Bacon compliance, a copy of the payroll time sheet form WH-347, a copy of the employee interview form, which will be used to interview all workers, and the Federal Labor Standards Provisions are attached to this section.

- C. Contractor shall take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
1. Affirmative steps shall include: Placing qualified small and minority businesses and women's business enterprises on solicitation lists; Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; Dividing total requirements, when economically feasible, into smaller tasks to permit maximum participation by small and minority business, and women's business enterprise; Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises; and Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce.
 2. The goals for this project are a minimum of five (5) percent MBE and WBE participation (1.3% MBE; 3.7% WBE). If these goals are not met the successful bidder must demonstrate a good faith effort in meeting the goals.
 3. The successful bidder must submit to the Engineer, within ten days of the bid opening, the appropriate one of either Attachment A (the MBE/WBE goals having been met) or Attachment B (the MBE/WBE goals not having been met) completed in its entirety. The Contractor shall submit to the Engineer, a quarterly compliance report (Form 334) listing the MBEs and WBEs, their work and the amount of payment to each during the quarter, for a duration of the contract.
- D. Liquidated Damages. Owner and Contractor recognize Owner will suffer financial loss if the Work is not completed within the times specified in Section 003113 "Preliminary Schedule", plus any extensions thereof allowed in accordance with approved Change Orders. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner five hundred dollars and zero cents (\$500.00) for each day that expires after the time specified Section 003113 "Preliminary Schedule" for Substantial Completion until the Work is substantially complete. After Substantial Completion if Contractor shall neglect, refuse or fail to complete the remaining Work within the time specified in Section 003113 "Preliminary Schedule" for completion and readiness for final payment or any proper extension thereof granted by Owner, Contractor shall pay Owner five hundred dollars and zero cents (\$500.00) for each day that expires after the time specified in Section 003113 "Preliminary Schedule" for completion and readiness for final payment.

END OF DOCUMENT 002213



***U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response***

Principles for Greener Cleanups

Protecting Communities and the Environment for a Sustainable Future

As a nation, we value land as a natural, cultural, and economic resource. Cleaning up contaminated land protects human health and the environment and enables communities and other stakeholders to pursue future beneficial use or reuse of resources for economic, environmental, and societal purposes. Prevention and remediation of contamination plays a central role in seeking a sustainable future.

A goal of the U.S. Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response (OSWER) and its many partners is to preserve and restore land by promoting and using protective waste management practices and by assessing and cleaning up contaminated sites. OSWER cleanup programs (including national and regional programs) address contaminated soil, groundwater, surface water, sediments, air, and other environmental media.

EPA cleanup programs include common elements such as an initial site assessment, initial site stabilization when needed to protect against imminent threats, site characterization, cleanup option evaluation, selection, and implementation, and when appropriate, longer-term management of the site. When done in close consultation with local communities, these cleanup programs not only protect human health but also allow communities and other stakeholders to promote beneficial, protective future uses of the property.

Doing our Work Smarter – and Greener

Cleaning up sites can be viewed as “green” from the perspective of the cleanup improving environmental and public health conditions. However, cleanup activities use energy, water and materials resources to achieve cleanup objectives. The process of cleanup therefore creates an environmental footprint of its own. Over time, we have learned that we can optimize environmental performance and implement protective cleanups that are **greener** by increasing our understanding of the environmental footprint and, when appropriate, and taking steps to minimize that footprint.

OSWER cleanup programs should consider these Principles for Greener Cleanups during any phase of work, including site investigation, evaluation of cleanup options, and optimization of the design, implementation, and operation of new or existing cleanups. All cleanup approaches, and all elements of the cleanup process, can be optimized to enhance their overall environmental outcome; therefore, green remediation involves more than merely adopting a specific technology or technique.

These Principles for Greener Cleanups are not intended to allow cleanups that do not satisfy threshold requirements for protectiveness, or do not meet other site specific cleanup objectives, to be considered greener cleanup. The Principles are not intended to trade cleanup program

objectives for other environmental objectives. Successful green cleanup practices can help achieve cleanup objectives by ensuring protectiveness while decreasing the environmental footprint of the cleanup activity itself. Some examples include using equipment that emits less particulate matter to the air, sizing equipment accurately to avoid wasted energy, water, and material, and using renewable energy or recycled material to decrease greenhouse gas emissions and conserve resources.

These Principles for Greener Cleanups are intended to improve the decision-making process for cleanup activities in a way that ensures the protection of human health and the environment and reduces environmental impacts on communities. These approaches can include environmental footprint assessment, resource efficiency, best management practices, and technology innovation. Green cleanup environmental footprint assessments should be conducted in a transparent manner and should include, at a minimum, energy use, air emissions, water impacts, materials use, and land and ecosystem protection. (See the attachment for additional information on the elements that may be considered in carrying out a green cleanup environmental footprint assessment.)

These Principles for Greener Cleanups focus on the environmental footprint of *cleanup* activities. Community and stakeholder input about the reasonably anticipated future land use of the site - residential, commercial, industrial, recreational, or ecological – are important and often integrated into cleanup decisions; however, greener cleanup assessments generally are not designed to provide information on the environmental impacts associated with the future uses of the property. While not a part of a greener cleanup assessment, communities and other stakeholders are encouraged to carefully assess and consider life cycle implications associated with the future use of the site and to adopt more sustainable approaches for land use, building and infrastructure design and construction, community health and livability, and resource conservation and protection.

While preventing and cleaning up contamination is inherently “green”, the terms green cleanup, greener cleanup, and green remediation are used by OSWER cleanup programs interchangeably in this and other documents.

As a matter of policy,

OSWER’s goal is to evaluate cleanup actions comprehensively to ensure protection of human health and the environment and to reduce the environmental footprint of cleanup activities, to the maximum extent possible. In considering these Principles, OSWER cleanup programs will assure that the cleanups and subsequent environmental footprint reduction occur in a manner that is consistent with statutes and regulations governing EPA cleanup programs and without compromising cleanup objectives, community interests, the reasonableness of cleanup timeframes, or the protectiveness of the cleanup actions. OSWER will continue to coordinate with its partners and develop approaches to facilitate continued progress in furthering these Principles for Greener Cleanups.

1. Consistent with existing laws and regulations, it is OSWER policy that all cleanups:
 - Protect human health and the environment
 - Comply with all applicable laws and regulations
 - Consult with communities regarding response action impacts consistent with existing requirements
 - Consider the anticipated future land use of the site.

2. The following five elements of a green cleanup assessment may assist in the evaluation and documentation used in selecting and implementing protective cleanup activities. (See the attachment for further information on these five elements.)

- Total Energy Use and Renewable Energy Use
- Air Pollutants and Greenhouse Gas Emissions
- Water Use and Impacts to Water Resources
- Materials Management and Waste Reduction
- Land Management and Ecosystems Protection

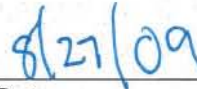
3 As tools are developed and deployed, when it is feasible to use greener cleanup approaches, OSWER cleanup programs will document how these five elements were considered and implement best practices to reduce the environmental footprint of cleanups. The nature of greener cleanup assessments can vary with the complexity of the site, program and community priorities, and the availability of tools. Assessment activities should be performed in a transparent manner involving the community and other stakeholders and describe how the programs have considered the items described in (1) and (2) above.

4. OSWER will evaluate progress in reducing the environmental footprint of protective cleanups.

5. Greener Cleanup approaches span multiple cleanup programs and reflect a developing set of practices. Legal authorities differ by cleanup program; environmental issues and community priorities differ from region-to-region and site-to-site; and greener cleanup best practices and assessment tools are at the early stages of development and testing. Greener cleanup approaches, therefore, may vary from site-to-site and program-to-program and will continue to evolve by incorporating lessons from the growing state of knowledge.



Mathy Stanislaus, Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency



Date:

Recommended Elements for Greener Cleanup Environmental Footprint Assessments and Best Practices

OSWER cleanup programs should consider these recommended elements when carrying out greener cleanup environmental footprint assessments and evaluating best practices that may be useful during the cleanup process.

1. Minimize Total Energy Use and Maximizes Use of Renewable Energy
 - Minimize energy consumption (e.g. use energy efficient equipment)
 - Power cleanup equipment through onsite renewable energy sources
 - Purchase commercial energy from renewable resources
2. Minimize Air Pollutants and Greenhouse Gas Emissions
 - Minimize the generation of greenhouse gases
 - Minimize generation and transport of airborne contaminants and dust
 - Use heavy equipment efficiently (e.g. diesel emission reduction plan)
 - Maximize use of machinery equipped with advanced emission controls
 - Use cleaner fuels to power machinery and auxiliary equipment
 - Sequester carbon onsite (e.g., soil amendments, revegetate)
3. Minimize Water Use and Impacts to Water Resources
 - Minimize water use and depletion of natural water resources
 - Capture, reclaim and store water for reuse (e.g. recharge aquifer, drinking water irrigation)
 - Minimize water demand for revegetation (e.g. native species)
 - Employ best management practices for stormwater
4. Reduce, Reuse and Recycle Material and Waste
 - Minimize consumption of virgin materials
 - Minimize waste generation
 - Use recycled products and local materials
 - Beneficially reuse waste materials (e.g., concrete made with coal combustion products replacing a portion of the Portland cement)
 - Segregate and reuse or recycle materials, products, and infrastructure (e.g. soil, construction and demolition debris, buildings)
5. Protect Land and Ecosystems
 - Minimize areas requiring activity or use limitations (e.g., destroy or remove contaminant sources)
 - Minimize unnecessary soil and habitat disturbance or destruction
 - Use native species to support habitat
 - Minimize noise and lighting disturbance



U.S. Department of Housing
and Urban Development

Labor Relations Desk Guide
LR01.DG

DAVIS-BACON

LABOR STANDARDS

*A Contractor's Guide
to Prevailing Wage Requirements
for Federally-Assisted Construction Projects*

January 2012
Previous versions obsolete

INTRODUCTION

This Guide has been prepared for you as a contractor performing work on construction projects that are assisted by the Department of Housing and Urban Development and subject to Davis-Bacon prevailing wage requirements. This Guide does not address contractor requirements involved in direct Federal contracting where HUD or another Federal agency enters into a procurement contract. In this latter case, the Federal Acquisition Regulations (FAR) are applicable. While the guidance contained in this Guide is generally applicable to any Davis-Bacon covered project, specific questions pertaining to direct Federal contracts should be addressed to the Contracting Officer who signed the contract for the Federal agency.

Our objective here is to provide you with a guide which is simple and non-bureaucratic yet comprehensive and which will help you better understand and comply with Davis-Bacon labor standards. HUD's Office of Labor Relations worked closely with the Department of Labor's Wage and Hour Division to make sure that the labor standards provisions in your contract and the specifics of complying with them represent the latest information. It is the Department of Labor which has general administrative oversight of all Federal contracting agencies, such as HUD, which administer the day-to-day responsibilities of enforcing Davis-Bacon provisions in construction contracts they either fund or assist in funding.

There are three chapters in this Guide. The first chapter offers a brief description of the laws and regulations associated with Federal labor standards administration and enforcement and discusses both what's in your contract that requires Davis-Bacon compliance and your responsibilities. The second chapter deals with labor standards and payroll reporting requirements. The third chapter discusses what can happen in the event there is a dispute about the wage rates that should be (or have been) paid and any back wages that may be due.

Finally, not all HUD construction projects are covered by Davis-Bacon wage rates. For the purpose of this Guide, we are assuming that a determination has already been made that Davis-Bacon wage rates are applicable. Should you wish assistance in determining whether Davis-Bacon wage rates apply to a particular project or if you need other related technical assistance, please consult with the HUD Labor Relations Field staff for your area. If you don't know which staff to contact, a list of Labor Relations field offices and their geographic areas and telephone numbers can be found on HUD's Home Page at the address below.

Visit the Office of Labor Relations on-line:

<http://www.hud.gov/offices/olr>

Obtain additional copies of this Guide and other publications at our website or by telephone from HUD's Customer Service Center at (800)767-7468.

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CHAPTER 1 LAWS, REGULATIONS, CONTRACTS AND RESPONSIBILITIES

The following paragraphs describe what the labor standards laws and regulations actually say and what they mean to you on HUD projects:

1-1 **DAVIS-BACON AND OTHER LABOR LAWS.**

- a. **The Davis-Bacon Act (DBA).** The Davis-Bacon Act requires the payment of prevailing wage rates (which are determined by the U.S. Department of Labor) to all laborers and mechanics on Federal government and District of Columbia construction projects in excess of \$2,000. Construction includes alteration and/or repair, including painting and decorating, of public buildings or public works.

Most HUD construction work is not covered by the DBA itself since HUD seldom contracts directly for construction services. Most often, if Davis-Bacon wage rates apply to a HUD project it is because of a labor provision contained in one of HUD's "Related Acts" such as the U. S. Housing Act of 1937, the National Housing Act, the Housing and Community Development Act of 1974, the National Affordable Housing Act of 1990, and the Native American Housing Assistance and Self-Determination Act of 1996. The Related Acts are often referred to as the Davis-Bacon and Related Acts or DBRA.

- b. **The Contract Work Hours and Safety Standards Act (CWHSSA).** CWHSSA requires time and one-half pay for overtime (O/T) hours (over 40 in any workweek) worked on the covered project. The CWHSSA applies to both direct Federal contracts and to indirect Federally-assisted contracts **except** where the assistance is solely in the nature of a loan guarantee or insurance. CWHSSA violations carry a liquidated damages penalty (\$10/day per violation). Intentional violations of CWHSSA standards can be considered for Federal criminal prosecution.

CWHSSA does not apply to prime contracts of \$100,000 or less. In addition, some HUD projects are not covered by CWHSSA because some HUD programs only provide loan guarantees or insurance. CWHSSA also does not apply to construction or rehabilitation contracts that are not subject to Federal prevailing wage rates (e.g., Davis-Bacon wage rates, or HUD-determined rates for operation of public housing and Indian block grant-assisted housing). However, even though CWHSSA overtime pay is not required, Fair Labor Standards Act (FLSA) overtime pay is probably still applicable. (See also Labor Relations Letter SL-95-01, CWHSSA Coverage threshold for overtime and health and safety provision, available on-line at the HUD Labor Relations Library at: www.hud.gov/offices/olr/library.cfm)

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- c. **The Copeland Act (Anti-Kickback Act).** The Copeland Act makes it a Federal crime for anyone to require any laborer or mechanic (employed on a Federal or Federally-assisted project) to kickback (i.e., give up or pay back) any part of their wages. The Copeland Act requires every employer (contractors and subcontractors) to submit weekly certified payroll reports (CPRs) and regulates permissible payroll deductions.
 - d. **The Fair Labor Standards Act (FLSA).** The FLSA contains Federal minimum wage rates, overtime (O/T), and child labor requirements. These requirements generally apply to any labor performed. The DOL has the authority to administer and enforce FLSA. HUD will refer to the DOL any possible FLSA violations that are found on HUD projects.

1-2 DAVIS-BACON REGULATIONS.

The Department of Labor (DOL) has published rules and instructions concerning Davis-Bacon and other labor laws in the Code of Federal Regulations (CFR). These regulations can be found in ***Title 29 CFR Parts 1, 3, 5, 6 and 7.*** Part 1 explains how the DOL establishes and publishes DBA wage determinations (aka wage decisions) and provides instructions on how to use the determinations. Part 3 describes Copeland Act requirements for payroll deductions and the submission of weekly certified payroll reports. Part 5 covers the labor standards provisions that are in your contract relating to Davis-Bacon Act wage rates and the responsibilities of contractors and contracting agencies to administer and enforce the provisions. Part 6 provides for administrative proceedings enforcing Federal labor standards on construction and service contracts. Last, Part 7 sets parameters for practice before the Administrative Review Board. These regulations are used as the basis for administering and enforcing the laws.

DOL Regulations are available on-line on the World Wide Web:
http://www.dol.gov/dol/allcfr/Title_29.htm

1-3 CONSTRUCTION CONTRACT PROVISIONS

Each contract subject to Davis-Bacon labor standards requirements must contain labor standards clauses and a Davis-Bacon wage decision. These documents are normally bound into the contract specifications.

- a. The labor standards clauses. The labor standards clauses describe the responsibilities of the contractor concerning Davis-Bacon wages and obligate the contractor to comply with the labor requirements. The labor standards clauses also provide for remedies in the event of violations, including withholding from payments due to the contractor to ensure the payment of wages or liquidated damages which may be found due. These contract clauses enable the contract administrator to enforce the Federal labor standards applicable to the project. HUD has standard forms that contain contract clauses. For example, the HUD-2554, Supplementary Conditions to the Contract for Construction, which is issued primarily for FHA multifamily housing and other construction projects

administered by HUD; the HUD-4010, Federal Labor Standards Provisions, which is used for CDBG and HOME projects, and the HUD-5370, General Conditions of the Contract for Construction or the HUD-5370-EZ (construction contracts ≤\$100,000) which are used for Public and Indian Housing projects.

HUD program labor standards forms are available on-line at:
www.hud.gov/offices/adm/hudclips/index.cfm

- b. Davis-Bacon Wage Decisions. The Davis-Bacon wage decision (or wage determination) is a listing of various construction work classifications, such as Carpenter, Electrician, Plumber and Laborer, and the minimum wage rates (and fringe benefits, where prevailing) that people performing work in those classifications must be paid.

Davis-Bacon wage decisions are established by the DOL for various types of construction (e.g., residential, heavy, highway) and apply to specific geographic areas, usually a county or group of counties. Wage decisions are modified from time to time to keep them current. In most cases, when the contract is awarded or when construction begins, the wage decision is “locked-in” and no future modifications are applicable to the contract or project involved.

All current Davis-Bacon wage decisions can be accessed on-line at no cost at:
<http://www.wdol.gov>

1-4 RESPONSIBILITY OF THE PRINCIPAL CONTRACTOR

The principal contractor (also referred to as the **prime** or **general contractor**) is responsible for the full compliance of all employers (the contractor, subcontractors and any lower-tier subcontractors) with the labor standards provisions applicable to the project. Because of the contractual relationship between a prime contractor and his/her subcontractors, subcontractors generally should communicate with the contract administrator only through the prime contractor. (See Contract Administrator, below.)

To make this Guide easier to understand, the term “prime contractor” will mean the principal contractor; “subcontractor” will mean all subcontractors including lower-tier subcontractors; and the term “employer” will mean all contractors as a group, including the prime contractor and any subcontractors and lower-tier subcontractors.

1-5 **RESPONSIBILITY OF THE CONTRACT ADMINISTRATOR.**

The **contract administrator** is responsible for the proper administration and enforcement of the Federal labor standards provisions on contracts covered by Davis-Bacon requirements. We use this term to represent the person (or persons) who will provide labor standards advice and support to you and other project principals (e.g., the owner, sponsor, architect), including providing the proper Davis-Bacon wage decision (see 2-1, **The Wage Decision**) and ensuring that the wage decision and contract clauses are incorporated into the contract for construction. The contract administrator also monitors labor standards compliance (see 2-6, **Compliance Reviews**) by conducting interviews with construction workers at the job site and reviewing payroll reports, and oversees any enforcement actions that may be required.

The contract administrator could be an employee or agent of HUD, or of a city or county or public housing agency. For HUD projects administered directly by HUD staff, usually FHA-insured multifamily projects, the contract administrator will be the HUD Labor Relations field staff. But many HUD-assisted projects are administered by local contracting agencies such as Public Housing Agencies (PHAs), Indian tribes and tribally-designated housing entities (TDHEs), and States, cities and counties under HUD's Community Development Block Grant (CDBG) and HOME programs. In these cases, the contract administrator will likely be local agency staff. In either case, the guidance for you remains essentially the same.

The DOL also has a role in monitoring Davis-Bacon administration and enforcement. In addition, DOL has independent authority to conduct investigations. A DOL investigator or other DOL representative may visit Davis-Bacon construction sites to interview construction workers or review payroll information.

CHAPTER 2 HOW TO COMPLY WITH LABOR STANDARDS AND PAYROLL REPORTING REQUIREMENTS

WHERE TO START? Now that you know you're on a Davis-Bacon project and you know some of the legal and practical implications, what's next?

SECTION I - THE BASICS

2-1 **THE WAGE DECISION.**

Davis-Bacon labor standards stipulate the wage payment requirements for Carpenters, Electricians, Plumbers, Roofers, Laborers, and other construction work classifications that may be needed for the project. The Davis-Bacon wage decision that applies to the project contains a schedule of work classifications and wage rates that must be followed. If you don't have it already (and by now you should), you'll want to get a copy of the applicable Davis-Bacon wage decision.

Remember, the wage decision is contained in the contract specifications along with the labor standards clauses. See 1-3, Construction Contract Provisions.

- a. **The work classifications and wage rates.** A Davis-Bacon wage decision is simply a listing of different work classifications and the minimum wage rates that must be paid to anyone performing work in those classifications. You'll want to make sure that the work classification(s) you need are contained in the wage decision and make certain you know exactly what wage rate(s) you will need to pay. Some wage decisions cover several counties and/or types of construction work (for example, residential and commercial work) and can be lengthy and difficult to read. Contact the contract administrator (HUD Labor Relations field staff or local agency staff) if you have any trouble reading the wage decision or finding the work classification(s) you need.

To make reading lengthy wage decisions easier for you, the contract administrator may prepare a Project Wage Rate Sheet (HUD-4720). This Sheet is a one-page transcript that will show only the classifications and wage rates for a particular project. A blank copy of a Project Wage Rate Sheet is provided for you in the appendix. Also, a fillable version of this form is available on-line at HUDClips (see web address in the Appendix). Contact the contract administrator monitoring your project for assistance with a Project Wage Rate Sheet.

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- b. **Posting the wage decision.** If you are the prime contractor, you will be responsible for posting a copy of the wage decision (or the Project Wage Rate Sheet) and a copy of the DOL Davis-Bacon poster titled Employee Rights under the Davis-Bacon Act (Form WH-1321) at the job site in a place that is easily accessible to all of the construction workers employed at the project and where the wage decision and poster won't be destroyed by wind or rain, etc. The Employee Rights under the Davis-Bacon Act poster is available in English and Spanish on-line at HUDClips (see address in the Appendix).

The Employee Rights under the Davis-Bacon Act poster (WH-1321) replaces the Notice to all Employees. The new poster is available in English and Spanish on-line at HUDClips (see address in the Appendix).

2-2 ADDITIONAL “TRADE” CLASSIFICATIONS AND WAGE RATES.

What if the work classification you need isn't on the wage decision? If the work classification(s) that you need doesn't appear on the wage decision, you will need to request an additional classification and wage rate. This process is usually very simple and you'll want to start the request right away. Basically, you identify the classification you need and recommend a wage rate for DOL to approve for the project. There are a few rules about additional classifications; you'll find these rules in the DOL regulations, Part 5, and in the labor clauses in your contract. The rules are summarized for you here:

- a. **Additional classification rules.** Additional classifications and wage rates can be approved if:
1. The requested classification is used by construction contractors in the area of the project. (The area is usually defined as the county where the project is located).
 2. The work that will be performed by the requested classification is not already performed by another classification that is already on the wage decision. (In other words, if there already is an Electrician classification and wage rate on the wage decision you can't request another Electrician classification and rate.)
 3. The proposed wage rate for the requested classification “fits” with the other wage rates already on the wage decision. (For example, the wage rate proposed for a trade classification such as Electrician must be at least as much as the lowest wage rate for other trade classifications already contained in the wage decision.) And,
 4. The workers that will be employed in the added classification (if it is known who the workers are/will be), or the workers' representatives, must agree with the proposed wage rate.

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- b. **Making the request.** A request for additional classification and wage rate must be made in writing through the contract administrator. (If the contract administrator is a local agency, the agency will send the request to the HUD Labor Relations staff.) If you are a subcontractor, your request should also go through the prime contractor. All you need to do is identify the work classification that is missing and recommend a wage rate (usually the rate that employer is already paying to the employees performing the work) for that classification. You may also need to describe the work that the new classification will perform.
- c. **HUD review.** The HUD Labor Relations field staff will review the requested classification and wage rate to determine whether the request meets the DOL rules outlined in paragraph 2-2(a), above. If additional information or clarification is needed, the staff will contact the prime contractor (or contract administrator for local agency projects) for more information, etc. If the Labor Relations review finds that the request meets the rules, the staff will give preliminary approval on the request and refer it to the DOL for final approval. The staff will send to you a copy of the preliminary approval/referral letter to the DOL.

If the HUD Labor Relations staff doesn't think the request meets the rules and if agreement can't be reached on the proper classification or wage rate for the work described, the HUD Labor Relations staff will not approve the request. In this case, the staff will send your request to the DOL with an explanation why HUD believes that the request shouldn't be approved. The DOL still has final decision authority. You will receive a copy of the disapproval/referral letter to the DOL.

- d. **DOL decision.** The DOL will respond to HUD Labor Relations in writing about the additional classification and wage rate request. HUD Labor Relations will notify you of the DOL decision in writing. If the DOL approves the request, the prime contractor must post the approval notice on the job site with the wage decision.

If the DOL does not approve the request, you will be notified about what classification and wage rate should be used for the work in question. You will also receive instructions about how to ask for DOL reconsideration if you still want to try to get your recommendation approved.

It's always a good idea to talk to the contract administrator before submitting an additional classification and wage rate request. The contract administrator can offer suggestions and advice that may save you time and increase the likelihood that DOL will approve your request. Usually, the contract administrator can give you an idea about what the DOL will finally decide.

2-3 **CERTIFIED PAYROLL REPORTS.**

You'll need to submit a weekly certified payroll report (CPR) beginning with the first week that your company works on the project and for every week afterward until your firm has completed its work. It's always a good idea to number the payroll reports beginning with #1 and to clearly mark your last payroll for the project "Final."

- a. **Payroll formats.** The easiest form to use is DOL's WH-347, Payroll. A sample copy of the WH-347 is included in the back of this Guide. You may access a fillable version of the WH-347 on-line at HUDClips (see web address in the Appendix). Also, the contract administrator can provide a few copies of the WH-347 that you can reproduce.

You are not required to use Payroll form WH-347. You are welcome to use any other type of payroll, such as computerized formats, as long as it contains all of the information that is required on the WH-347.

- b. **Payroll certifications.** The weekly payrolls are called certified because each payroll is signed and contains language certifying that the information is true and correct. The payroll certification language is on the reverse side of the WH-347. If you are using another type of payroll format you may attach the certification from the back of the WH-347, or any other format which contains the same certification language on the WH-347 (reverse).

DOL's website has Payroll Instructions and the Payroll form WH-347 in a "fillable" PDF format at this address:
www.dol.gov/whd/forms/wh347.pdf

- c. **"No work" payrolls.** "No work" payrolls may be submitted whenever there is a temporary break in your work on the project, for example, if your firm is not needed on the project right now but you will be returning to the job in a couple of weeks. (See tip box, for "no work" payroll exemption!) However, if you know that your firm will not be working on the project for an extended period of time, you may wish to send a short note to the contract administrator to let them know about the break in work and to give an approximate date when your firm will return to the project. If you number payrolls consecutively or if you send a note, you do not need to send "no work" payrolls.

If you number your payroll reports consecutively, you do not need to submit "no work" payrolls!

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- d. **Payroll review and submission.** The prime contractor should review each subcontractor's payroll reports for compliance prior to submitting the reports to the contract administrator. Remember, the prime contractor is responsible for the full compliance of all subcontractors on the contract and will be held accountable for any wage restitution that may be found due to any laborer or mechanic that is underpaid and for any liquidated damages that may be assessed for overtime violations. All of the payroll reports for any project must be submitted to the contract administrator through the prime contractor.

An alert prime contractor that reviews subcontractor payroll submissions can detect any misunderstandings early, prevent costly underpayments and protect itself from financial loss should underpayments occur.

- e. **Payroll retention.** Every contractor (including every subcontractor) must keep a complete set of their own payrolls and other basic records such as employee addresses and full SSNs, time cards, tax records, evidence of fringe benefit payments, for a Davis-Bacon project for at least 3 years after the project is completed. The prime contractor must keep a complete set of all of the payrolls for every contractor (including subcontractors) for at least 3 years after completion of the project.
- f. **Payroll inspection.** In addition to submitting payrolls to the contract administrator, every contractor (including subcontractors) must make their own copy of the payrolls and other basic records available for review or copying to any authorized representative from HUD or from DOL.

2-4 DAVIS-BACON DEFINITIONS.

Before we discuss how to complete the weekly payroll forms, we need to review a couple of definitions. These definitions can help you understand what will be required of you:

- a. **Laborer or mechanic.** "Laborers" and "mechanics" mean anyone who is performing construction work on the project, including trade journeymen (carpenters, plumbers, sheet metal workers, etc.), apprentices, and trainees and, for CWHSSA purposes, watchmen and guards. "Laborers" and "mechanics" are the two groups of workers that must be paid not less than Davis-Bacon wage rates.
1. **Working foremen.** Foremen or supervisors that regularly spend more than 20% of their time performing construction work and do not meet the exclusions in paragraph 2 below are covered "laborers" and "mechanics" for labor standards purposes for the time spent performing construction work.
 2. **Exclusions.** People whose duties are primarily administrative, executive or clerical are not laborers or mechanics. Examples include superintendents, office staff, timekeepers, messengers, etc. (Contact the contract administrator if you have any questions about whether a particular employee is excluded.)

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- b. **Employee.** Every person who performs the work of a laborer or mechanic is “employed” regardless of any contractual relationship which may be alleged to exist between a contractor or subcontractor and such person. This means that even if there is a contract between a contractor and a worker, the contractor must make sure that the worker is paid at least as much as the wage rate on the wage decision for the classification of work they perform. Note that there are no exceptions to the prevailing wage requirements for relatives or for self-employed laborers and mechanics.

For more information about working subcontractors, ask the contract administrator or your HUD Labor Relations Field Staff for a copy of Labor Relations Letter LR-96-01, Labor standards compliance requirements for self-employed laborers and mechanics. Labor Relations Letters and other helpful Labor Relations publications are available at HUD’s Labor Relations web site (see the list of web site addresses in the Appendix).

- c. **Apprentices and trainees.** The only workers who can be paid less than the wage rate on the wage decision for their work classification are “apprentices” and “trainees” registered in approved apprenticeship or training programs. Approved programs are those which have been registered with the DOL or a DOL-recognized State Apprenticeship Council (SAC). Apprentices and trainees are paid wage rates in accordance with the wage schedule in the approved program.

Most often, the apprentice/trainee wage rate is expressed as a series of percentages tied to the amount of time spent in the program. For example, 0-6 months: 65%; 6 months - 1 year: 70%; etc. The percentage is applied to the journeyman’s wage rate. On Davis-Bacon projects, the percentage must be applied to the journeyman’s wage rate on the applicable wage decision for that craft.

1. **Probationary apprentice.** A “probationary apprentice” can be paid as an apprentice (less than the rate on the wage decision) if the DOL or SAC has certified that the person is eligible for probationary employment as an apprentice.
2. **Pre-apprentice.** A “pre-apprentice”, that is, someone who is not registered in a program and who hasn’t been DOL- or SAC-certified for probationary apprenticeship is not considered to be an “apprentice” and must be paid the full journeyman’s rate on the wage decision for the classification of work they perform.
3. **Ratio of apprentices and trainees to journeymen.** The maximum number of apprentices or trainees that you can use on the job site cannot exceed the ratio of apprentices or trainees to journeymen allowed in the approved program.

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- d. **Prevailing wages or wage rates.** Prevailing wage rates are the wage rates listed on the wage decision for the project. The wage decision will list a minimum basic hourly rate of pay for each work classification. Some wage decisions include fringe benefits which are usually listed as an hourly fringe rate. If the wage decision includes a fringe benefit rate for a classification, you will need to add the fringe benefit rate to the basic hourly rate unless you provide bona fide fringe benefits for your employees.
1. **Piece-work.** Some employees are hired on a piece-work basis, that is, the employee's earnings are determined by a factor of work produced. For example, a Drywall Hanger's earnings may be calculated based upon the square feet of sheetrock actually hung, a Painter's earnings may be based upon the number of units painted. Employers may calculate weekly earnings based upon piece rates provided the weekly earnings are sufficient to satisfy the wage rate requirement based upon actual hours, including any overtime, worked. Accurate time records must be maintained for any piece-work employees. If the weekly piece rate earnings are not sufficient, the employer must recompute weekly earnings based upon the actual hours worked and the rate on the wage decision for the work classification(s) involved.
- e. **Fringe benefits** Fringe benefits can include health insurance premiums, retirement contributions, life insurance, vacation and other paid leave as well as some contributions to training funds. Fringe benefits do not include employer payments or contributions required by other Federal, State or local laws, such as the employer's contribution to Social Security or some disability insurance payments.

Note that the total hourly wage rate paid to any laborer or mechanic (basic wage or basic wage plus fringe benefits) may be no less than the total wage rate (basic wage or basic wage plus fringe benefits) on the wage decision for their craft. If the value of the fringe benefit(s) you provide is less than the fringe benefit rate on the wage decision, you will need to add the balance of the wage decision fringe benefit rate to the basic rate paid to the employee. For example, if the wage decision requires \$10/hour basic rate plus \$5/hour fringe benefits, you must pay no less than that total (\$15/hour) in the basic rate or basic rate plus whatever fringe benefit you may provide. You can meet this obligation in several ways: you could pay the base wage and fringe benefits as stated in the wage decision, or you could pay \$15 in base wage with no fringe benefits, or you could pay \$12 basic plus \$3 fringe benefits. You can also off-set the amount of the base wage if you pay more in fringe benefits such as by paying \$9 basic plus \$6 fringe benefits; as long as you meet the total amount. The amount of the base wage that you may off-set with fringe benefits is limited by certain IRS and FLSA requirements.

- f. **Overtime.** Overtime hours are defined as all hours worked on the contract in excess of 40 hours in any work week. Overtime hours must be paid at no less than one and one-half times the regular rate of basic pay plus the straight-time rate of any required fringe benefits.

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- g. **Deductions.** You may make payroll deductions as permitted by DOL Regulations 29 CFR Part 3. These regulations prohibit the employer from requiring employees to “kick-back” (i.e., give up) any of their earnings. Allowable deductions which do not require prior DOL permission include employee obligations for income taxes, Social Security payments, insurance premiums, retirement, savings accounts, and any other legally-permissible deduction authorized by the employee. Deductions may also be made for payments on judgments and other financial obligations legally imposed against the employee.

Referring, again, to our example above where the wage decision requiring a \$15 total wage obligation (\$10 basic wage plus \$5 fringe benefits) was met by paying \$9 base wage plus \$6 fringe benefits: Note that overtime rates must be based on one and one-half times the basic rate as stated on the wage decision. In the above example, the employer must pay for overtime: \$15/hr (\$9 basic + \$6 fringe) plus \$5 (one-half of \$10, the wage decision basic rate) for a total of \$20 per hour.

- h. **Proper designation of trade.** You must select a work classification on the wage decision for each worker based on the actual type of work he/she performed and you must pay each worker no less than the wage rate on the wage decision for that classification regardless of their level of skill. In other words, if someone is performing carpentry work on the project, they must be paid no less than the wage rate on the wage decision for Carpenters even if they aren’t considered by you to be fully trained as a Carpenter. Remember, the only people who can be paid less than the rate for their craft are apprentices and trainees registered in approved programs.
1. **Split-classification.** If you have employees that perform work in more than one trade during a work week, you can pay the wage rates specified for each classification in which work was performed only if you maintain accurate time records showing the amount of time spent in each classification of work. If you do not maintain accurate time records, you must pay these employees the highest wage rate of all of the classifications of work performed.
- i. **Site of work.** The “site of work” is where the Davis-Bacon wage rates apply. Usually, this means the boundaries of the project. “Site of work” can also include other adjacent or virtually adjacent property used by a contractor or subcontractor in the construction of the project, like a fabrication site that is dedicated exclusively, or nearly so, to the project.

SECTION II - REPORTING REQUIREMENTS

2-5 **COMPLETING A PAYROLL REPORT.**

What information has to be reported on the payroll form? The weekly payroll form doesn't ask for any information that you don't already need to keep for wage payment and tax purposes. For example, you need to know each employee's name; his or her work classification (who is working for you and what do they do?), the hours worked during the week, his or her rate of pay, the gross amount earned (how much did they earn?), the amounts of any deductions for taxes, etc., and the net amount paid (how much should the paycheck be made out for?). No more information than you need to know in order to manage your work crew and make certain they are paid properly. And, certainly, no more information than you need to keep for IRS, Social Security and other tax and employment purposes.

For many contractors, the Weekly Certified Payroll is the only Davis-Bacon paperwork you need to submit!

You are required to submit certified payrolls to illustrate and document that you have complied with the prevailing wage requirements. The purpose of the contract administrator's review of your payrolls is to verify your compliance. Clearer and complete payroll reports will permit the contract administrator to complete reviews of your payroll reports quickly.

- a. **Project and contractor/subcontractor information.** Each payroll must identify the contractor or subcontractor's name and address, the project name and number, and the week ending date. Indicate the week dates in the spaces provided. Numbering payrolls is optional but strongly recommended.
- b. **Employee information.** Effective January 18, 2009, payrolls shall not report employee addresses or full Social Security Numbers (SSNs). Instead, the first payroll on which each employee appears shall include the employee's name and an individually identifying number, usually the last 4 digits of the employee's SSN. Afterward, the identifying number does not need to be reported unless it is necessary to distinguish between employees, e.g., if two employees have the same name.

Employers (prime contractors and subcontractors) must maintain the current address and full SSN for each employee and must provide this information upon request to the contracting agency or other authorized representative responsible for federal labor standards compliance monitoring. Prime contractors may require a subcontractor(s) to provide this information for the prime contractor's records. DOL has modified form WH-347, Payroll, to accommodate these reporting requirements.

- c. **Work classification.** Each employee must be classified in accordance with the wage decision based on the type of work they actually perform.

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1. **Apprentices or trainees.** The first payroll on which any apprentice or trainee appears must be accompanied by a copy of that apprentice's or trainee's registration in a registered or approved program. A copy of the portions of the registered or approved program pertaining to the wage rates and ratios shall also accompany the first payroll on which the first apprentice or trainee appears.
 2. **Split classifications.** For an employee that worked in a split classification, make a separate entry for each classification of work performed distributing the hours of work to each classification, accordingly, and reflecting the rate of pay and gross earnings for each classification. Deductions and net pay may be based upon the total gross amount earned for all classifications.
- d. **Hours worked.** The payroll should show ONLY the regular and overtime hours worked on this project. Show both the daily and total weekly hours for each employee. If an employee performs work at job sites other than the project for which the payroll is prepared, those "other job" hours should not be reported on the payroll. In these cases, you should list the employee's name, classification, hours for this project only, the rate of pay and gross earnings for this project, and the gross earned for all projects. Deductions and net pay may be based upon the employee's total earnings (for all projects) for the week.
- e. **Rate of pay.** Show the basic hourly rate of pay for each employee for this project. If the wage decision includes a fringe benefit and you do not participate in approved fringe benefit programs, add the fringe benefit rate to the basic hourly rate of pay. Also list the overtime rate if overtime hours were worked.
1. **Piece-work.** For any piece-work employees, the employer must compute an effective hourly rate for each employee each week based upon the employee's piece-work earnings for that week. To compute the effective hourly rate, divide the piece-work earnings by the total number of hours worked, including consideration for any overtime hours.

The effective hourly rate must be reflected on the certified payroll and this hourly rate may be no less than the wage rate (including fringe benefits, if any) on the wage decision for the classification of work performed. It does not matter that the effective hourly rate changes from week-to-week, only that the rate is no less than the rate on the wage decision for the classification of work performed.

Remember, the overtime rate is computed at one and one-half times the basic rate of pay plus any fringe benefits. For example, if the wage decision requires \$10/hour basic plus \$5/hour fringe benefits, the overtime rate would be: $(\$10 \times 1 \frac{1}{2}) + \$5 = \$20/\text{hour}$.

- f. **Gross wages earned.** Show the gross amount of wages earned for work performed on this project. Note: For employees with work hours and earnings on other projects, you may show gross wages for this project over gross earnings all projects (for example, \$425.40/\$764.85) and base deductions and net pay on the "all projects" earnings.

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- g. **Deductions.** Show the amounts of any deductions from the gross earnings. “Other” deductions should be identified (for example, Savings Account or Loan Repayment). Any voluntary deduction (that is, not required by law or by an order of a proper authority) must be authorized in writing by the employee or provided for in a collective bargaining (union) agreement. A short note signed by the employee is all that is needed and should accompany the first payroll on which the other deduction appears.

Only one employee authorization is needed for recurring (e.g., weekly) other deductions. Written employee authorization is not required for income tax and Social Security deductions.

- h. **Net pay.** Show the net amount of wages paid.
- i. **Statement of compliance.** The Statement of Compliance is the certification. It is located on the reverse side of a standard payroll form (WH-347). Be sure to complete the identifying information at the top, particularly if you are attaching the Statement of Compliance to an alternate payroll form such as a computer payroll. Also, you must check either 4(a) or 4(b) if the wage decision contains a fringe benefit. Checking 4(a) indicates that you are paying required fringe benefits to approved plans or programs; and 4(b) indicates that you are paying any required fringe benefit amounts directly to the employee by adding the fringe benefit rate to the basic hourly rate of pay. If you are paying a portion of the required fringe benefit to programs and the balance directly to the employee, explain those differences in box 4(c).

Only one Statement of Compliance is required for each employer’s weekly payroll no matter how many pages are needed to report the employee data.

- j. **Signature.** Make sure the payroll is signed with an original signature in ink. The payroll must be signed by a principal of the firm (owner or officer such as the president, treasurer or payroll administrator) or by an authorized agent (a person authorized by a principal in writing to sign the payroll reports). Signature authorization (for persons other than a principal) should be submitted with the first payroll signed by such an agent. Signatures in pencil; signature stamps; xerox, pdf and other facsimiles are not acceptable.

SECTION III - PAYROLL REVIEWS AND CORRECTIONS

2-6 COMPLIANCE REVIEWS.

The contract administrator or other inspector may visit the project site and interview some of the workers concerning their employment on the project. The DOL may also independently conduct its own reviews (see 1-5). In addition, the contract administrator will periodically review payrolls and related submissions, comparing the interview information to the payrolls, to ensure that the labor standards requirements have been met. You will be notified by the contract administrator if these reviews find any discrepancies or errors. You will be given instructions about what steps must be taken to correct any problems.

- a. **On-site interviews.** Every employer (contractor, subcontractor, etc.) must make their employees available for interview at the job site with the contract administrator or other agency representative, or HUD or DOL representative. The interviews are confidential and the employee will be asked about the kind of work they perform and their rate of pay. Every effort will be made to ensure that these interviews cause as little disruption as possible to the on-going work. The interviewer will record the interview information, usually on a form HUD-11, Record of Employee Interview, and forward the interviews to the contract administrator.
- b. **Project payroll reviews.** The contract administrator will compare the information on the interview forms to the corresponding payrolls to ensure that the workers are properly listed on the payrolls for the days and hours worked on the job site, work classification and rate of pay. The contract administrator will also review the payroll submissions to make certain that the payrolls are complete and signed; that employees are paid no less than the wage rate for the work classification shown; apprentice and trainee certifications are submitted (where needed); employee or other authorizations for other deductions are submitted (where needed); etc.

2-7 TYPICAL PAYROLL ERRORS AND REQUIRED CORRECTIONS.

The following paragraphs describe common payroll errors and the corrective steps you must take.

- a. **Inadequate payroll information.** If an alternate payroll format used by an employer (such as some computer payrolls) is inadequate, e.g., does not contain all of the necessary information that would be on the optional form WH-347, the employer will be asked to resubmit the payrolls on an acceptable form.
- b. **Missing identification numbers.** If the first payroll on which an employee appears does not contain the employee's individually identifying number, the employer will be asked to supply the missing information. This information can be reported on the next payroll submitted by the employer if the employer is still working on the project. Otherwise, the employer will be asked to submit a correction certified payroll.

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- c. **Incomplete payrolls.** If the information on the payroll is not complete, for example, if work classifications or rates of pay are missing, the employer will be asked to send a correction certified payroll.
- d. **Classifications.** If the payrolls show work classifications that do not appear on the wage decision, the employer will be asked to reclassify the employees in accordance with the wage decision or the employer may request an additional classification and wage rate (see 2-2). If reclassification results in underpayment (i.e., the wage rate reported on the payroll is less than the rate required for the new classification), the employer will be asked to pay wage restitution to all affected reclassified employees. (see 2-8 for instructions about wage restitution.)
- e. **Wage rates.** If the wage rates on the payroll are less than the wage rates on the wage decision for the work classifications reported, the employer will be asked to pay wage restitution to all affected employees.
- f. **Apprentices and trainees.** If a copy of the employee's registration or the approved program ratio and wage schedule are not submitted with the first payroll on which an apprentice or trainee appears, the employer will be asked to submit a copy of each apprentice's or trainee's registration and/or the approved program ratio and wage schedule. If the ratio of apprentices or trainees to journeymen on the payroll is greater than the ratio in the approved program, the employer will be asked to pay wage restitution to any excess apprentices or trainees. Also, any apprentice or trainee that is not registered in an approved program must receive the journeyman's wage rate for the classification of work they performed.
- g. **Overtime.** If the employees did not receive at least time and one-half for any overtime hours worked on the project, the following will occur:
1. If the project is subject to CWHSSA overtime requirements, the employer will be asked to pay wage restitution for all overtime hours worked on the project. The employer may also be liable to the United States for liquidated damages computed at \$10 per day per violation. Or,
 2. If the project is not subject to CWHSSA, the employer will be notified of the possible FLSA overtime violations. Also, the contract administrator may refer the matter to the DOL for further review.
- h. **Computations.** If the payroll computations (hours worked times rate of pay) or extensions (deductions, net pay) show frequent errors, the employer will be asked to take greater care. Wage restitution may be required if underpayments resulted from the errors.
- i. **Deductions.** If there are any "Other" deductions that are not identified, or if employee authorization isn't provided, or if there is any unusual (very high, or large number) deduction activity, the employer will be asked to identify the deductions, provide employee authorization or explain unusual deductions, as necessary.

HUD does not enforce or attempt to provide advice on employer obligations to make deductions from employee earnings for taxes or Social Security. However, HUD may refer to the IRS or other responsible agency copies of certified payroll reports that show wages paid in gross amounts (i.e., without tax deduction) for its review and appropriate action.

- j. **Fringe benefits.** If the wage decision contains fringe benefits but the payroll does not indicate how fringe benefits were paid [neither 4(a) nor 4(b) is marked on the Statement of Compliance], the employer may be asked to submit correction certified payrolls and will be required to pay wage restitution if underpayments occurred. However, if the basic hourly rates for the employees are at least as much as the total wage rate on the wage decision (basic hourly rate plus the fringe benefit rate), no correction is necessary.
- k. **Signature.** If the payroll Statement of Compliance is not signed or is missing, the employer will be asked to submit a signed Statement of Compliance for each payroll affected. If the Statement of Compliance is signed by a person who is not a principle of the firm and that person has not been authorized by principle to sign, the employer will be asked to provide an authorization or to resubmit the Statement(s) of Compliance bearing the signature of a principle or other authorized signatory.
- l. **On-site interview comparisons.** If the comparison of on-site interviews to the payrolls indicates any discrepancies (for example, the employee does not appear on the payroll for the date of the interview), the employer will be asked to submit a correction certified payroll report.
- m. **Correction certified payroll.** Any and all changes to data on a submitted payroll report must be reported on a certified correction payroll. In no case will a payroll report be returned to the prime contractor or employer for revision.

2-8 RESTITUTION FOR UNDERPAYMENT OF WAGES.

Where underpayments of wages have occurred, the employer will be required to pay wage restitution to the affected employees. Wage restitution must be paid promptly in the full amounts due, less permissible and authorized deductions. All wages paid to laborers and mechanics for work performed on the project, including wage restitution, must be reported on a certified payroll report.

- a. **Notification** to the Employer/Prime contractor. The contract administrator will notify the employer and/or prime contractor in writing of any underpayments that are found during payroll or other reviews. The contract administrator will describe the underpayments and provide instructions for computing and documenting the restitution to be paid. The employer/prime contractor is allowed 30 days to correct the underpayments. Note that the prime contractor is responsible to the contract administrator for ensuring that restitution is paid. If the employer is a subcontractor, the subcontractor will usually make the computations and restitution payments and furnish the required documentation through the prime contractor.

The contract administrator may communicate directly with a subcontractor when the underpayments are plainly evident and the subcontractor is cooperative. It is best to work through the prime contractor when the issues are complex, when there are significant underpayments and/or the subcontractor is not cooperative. In all cases, the subcontractor must ensure that the prime contractor receives a copy of the required corrective documentation.

- b. **Computing wage restitution.** Wage restitution is simply the difference between the wage rate paid to each affected employee and the wage rate required on the wage decision for all hours worked where underpayments occurred. The difference in the wage rates is called the adjustment rate. The adjustment rate times the number of hours involved equals the gross amount of restitution due. You may also compute wage restitution by calculating the total amount of Davis-Bacon wages earned and subtracting the total amount of wages paid. The difference is the amount of back wages due.
- c. **Correction certified payrolls.** The employer will be required to report the restitution paid on a correction certified payroll. The correction payroll will reflect the period of time for which restitution is due (for example, Payrolls #1 through #6; or a beginning date and ending date). The correction payroll will list each employee to whom restitution is due and their work classification; the total number of work hours involved (daily hours are usually not applicable for wage restitution); the adjustment wage rate (the difference between the required wage rate and the wage rate paid); the gross amount of restitution due; deductions and the net amount actually paid. A properly signed Statement of Compliance must accompany the correction payroll.

HUD no longer requires the signature of the employee on the correction payroll to evidence employee receipt of restitution payment. In addition, except in the most extraordinary cases, HUD no longer requires employers to submit copies of restitution checks (certified, cashiers, canceled or other), or employee-signed receipts or waivers.

- d. **Review of correction CPR.** The contract administrator will review the correction certified payroll to ensure that full restitution was paid. The prime contractor shall be notified in writing of any discrepancies and will be required to make additional payments, if needed, documented on a correction certified payroll within 30 days.
- e. **Unfound workers.** Sometimes, wage restitution cannot be paid to an affected employee because, for example, the employee has moved and can't be located. After wage restitution has been paid to all of the workers who could be located, the employer must submit a list of any workers who could not be found and paid (i.e., unfound workers) providing their names, Social Security Numbers, last known addresses and the gross amount due. In such cases, at the end of the project the prime contractor will be required

to place in a deposit or escrow account an amount equal to the total gross amount of restitution that could not be paid because the employee(s) could not be located. The contract administrator will continue attempts to locate the unfound workers for 3 years after the completion of the project. After 3 years, any amount remaining in the account for unfound workers will be credited and/or forwarded by the contract administrator to HUD.

CHAPTER 3 LABOR STANDARDS DISPUTES, ADMINISTRATIVE REVIEWS, WITHHOLDING, DEPOSITS AND ESCROW ACCOUNTS, AND SANCTIONS

WHAT HAPPENS WHEN THINGS GO WRONG?

3-1 INTRODUCTION.

Even in the best of circumstances, things can go wrong. In a Davis-Bacon context, “things going wrong” usually means there’s a difference of opinion or a dispute about whether and to what extent underpayments have occurred. These disputes are usually between the contract administrator and one or more employers (the prime contractor and/or a subcontractor). The dispute may involve something simple such as an additional classification request that is pending before the DOL; or something as significant as investigative findings following a complaint of underpayment. This chapter discusses some of what you may expect and what you can do to make your views known and to lessen any delays in resolving the problem or issue.

3-2 ADMINISTRATIVE REVIEW ON LABOR STANDARDS DISPUTES.

As mentioned in the Introduction above, a dispute about labor standards and compliance can arise for a number of reasons. The labor standards clauses in your contract and DOL regulations provide for administrative review of issues where there is a difference of views between the contract administrator and any employer. The most common circumstances include:

- a. **Additional classifications and wage rates.** Additional classification and wage rate requests are sometimes denied by the DOL. An employer that is dissatisfied with the denial can request reconsideration by the DOL Wage and Hour Administrator. The employer may continue to pay the wage rate, as requested, until a final decision is rendered on the matter. When the final decision is known, the employer will be required to pay any additional wages that may be necessary to satisfy the wage rate that is established.
 1. **Reconsideration.** The DOL normally identifies the reasons for denial in its response to the request. Any interested person (for example, the contract administrator, employer, representatives of the employees) may request reconsideration of the decision on the additional classification request. The request for reconsideration must be made in writing and must thoroughly address the denial reasons identified by the DOL. Employer requests for reconsideration should be made through the contract administrator but may be made directly to the DOL. (See 2-2(d), and also DOL Regulations 29 CFR 1.8.) All requests initiated by or made through the contract administrator or HUD must be submitted through the HUD Headquarters Office of Labor Relations.

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2. **Administrative Review Board.** Any interested party may request a review of the Administrator's decision on reconsideration by the DOL's Administrative Review Board. DOL regulations 29 CFR Part 7 explain the procedures for such reviews. (See also 29 CFR 1.9.)

- b. **Findings of underpayment.** Compliance reviews and other follow-up enforcement actions may result in findings of underpayment. The primary goal in every case and at every step in this process is to reach agreements about who may have been underpaid and how much wage restitution may be due and, of course, to promptly deliver restitution to any underpaid workers. The contract administrator will usually work informally with you to reach such agreements. You will have an opportunity to provide additional information to the contract administrator that may explain apparent inconsistencies and/or resolve the discrepancies.

If informal exchanges do not result in agreement, the final determination and schedule of back wages due will be presented to you in writing and you will be permitted 30 days in which to correct the underpayment(s) or to request a hearing on the matter before the DOL. The request for hearing must be made in writing through the contract administrator and must explain what findings are in dispute and the reasons. In such cases, HUD is required to submit a report to DOL for review and further consideration. All requests for DOL hearing must be submitted through the HUD Headquarters Office of Labor Relations.

1. **DOL review.** The DOL will review the contract administrator's report and the arguments against the findings presented in the hearing request. The DOL may affirm or modify the findings based upon the materials presented. You will be notified in writing by the DOL of the results of its review. If DOL concludes that violations have occurred, you will be given an opportunity to correct any underpayments or to request a hearing before a DOL Administrative Law Judge (ALJ). (See DOL Regulations 29 CFR 5.11 (b) and 29 CFR Part 6, Rules of Practice for Administrative Proceedings.)
2. **Administrative Review Board.** Contractors and/or subcontractors may request a review by the Administrative Review Board of the decision(s) rendered by the DOL ALJ in the administrative hearing process. See DOL regulations 29 CFR Part 7 for more information about this proceeding.

3-3 WITHHOLDING.

The contract administrator shall cause withholding from payments due to the prime contractor to ensure the payment of wages which are believed to be due and unpaid, for example, if wage underpayments or other violations are not corrected within 30 days after written notification to the prime contractor. DOL may also direct the withholding of contract payments for alleged wage underpayments. Withholding is considered to be serious and is not taken unless warranted. If withholding is deemed necessary, you will be notified in writing. Only the amounts needed to meet the contractor's (and/or subcontractors') liability shall be withheld.

3-4 **DEPOSITS AND ESCROWS.**

In every case, we attempt to complete compliance actions and resolve any disputes before the project is completed and final payments are made. Sometimes, corrective actions or disputes continue after completion and provisions must be made to ensure that funds are available to pay any wage restitution that is ultimately found due. In these cases, we allow projects to proceed to final closing and final payments provided the prime contractor deposits an amount equal to the potential liability for wage restitution and liquidated damages, if necessary, in a special account. The deposit or escrow account is controlled by the contract administrator. When a final decision is rendered, the contract administrator makes disbursements from the account in accordance with the decision. Deposit/escrow accounts are established for one or more of the following reasons:

Remember, the prime contractor is responsible and will be held liable for any wage restitution that is due to any worker employed in the construction of the project, including workers employed by subcontractors and any lower-tier subcontractors. See 1-4, Responsibility of the Principal Contractor, and 2-8, Restitution for Underpayment of Wages.

- a. **Where the parties have agreed to amounts of wage restitution that are due** but the employer hasn't furnished evidence yet that all of the underpaid workers have received their back wages, e.g., some of the workers have moved and could not be located. The amount of the deposit is equal to the total gross amount of restitution due to workers lacking payment evidence. As these workers are paid and proper documentation is provided to the contract administrator, amounts corresponding to the documented payments are returned to the depositor. Amounts for any workers who cannot be located are held in the deposit/escrow account for three years and disposed as described in 2-8(f) of this Guide.
- b. **Where underpayments are suspected or alleged and an investigation has not yet been completed.** The deposit is equal to the amount of wage restitution and any liquidated damages, if applicable, that are estimated to be due. If the final determination of wages due is less than the amount estimated and placed in the escrow account, the escrow will be reduced to the final amount and the difference will be returned to the depositor.

If the parties agree to the investigative findings, the amounts due to the workers will be paid by the employer. As these workers are paid and proper documentation is provided to the contract administrator, the gross amounts corresponding to the documented payments are returned to the depositor.

- 1. If the employer is unable to make the payments to the workers, e.g., lacks the funds necessary, the contract administrator may make disbursements directly to the workers in the net amounts calculated by the employer. The amounts withheld from the workers for tax deduction will be returned to the employer as payments to workers are made. The employer shall be responsible for reporting and transmitting withholdings to the appropriate agencies.

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2. If the employer is not cooperating in the resolution, the contract administrator shall make disbursements to the workers in accordance with the schedule of wages due. Amounts for unfound workers will be retained as described above (See 2-8(f) and 3-4(a)).

If the parties do not agree and an administrative hearing is requested, the escrow will be maintained as explained in 3-4(c), below.

Remember, if you have any questions or need assistance concerning labor standards requirements help is always available. Contact the contract administrator for the project you're working on or the HUD Field Labor Relations staff in your area.

- c. **Where the parties are waiting for the outcome of an administrative hearing** that has been or will be requested contesting a final determination of wages due. The deposit shall be equal to the amount of wage restitution and liquidated damages, if applicable, that have been determined due. Once a final decision is rendered, disbursements from the escrow account are made in accordance with the decision.

3-5 ADMINISTRATIVE SANCTIONS.

Contractors and/or subcontractors that violate the labor standards provisions may face administrative sanctions imposed by HUD and/or DOL.

- a. **DOL debarment.** Contractors and/or subcontractors that are found by the Secretary of Labor to be in aggravated or willful violation of the labor standards provisions of the Davis-Bacon and Related Acts (DBRA) will be ineligible (debarred) to participate in any DBRA or Davis-Bacon Act contracts for up to 3 years. Debarment includes the contractor or subcontractor and any firm, corporation, partnership or association in which the contractor or subcontractor has a substantial interest. Debarment proceedings can be recommended by the contract administrator or can be initiated by the DOL. Debarment proceedings are described in DOL regulations 29 CFR 5.12.
- b. **HUD sanctions.** HUD sanctions may include Limited Denials of Participation (LDPs), debarments and suspensions.
 1. **Limited Denial of Participation.** HUD may issue to the employer a limited denial of participation (LDP) which prohibits the employer from further participation in HUD programs for a period up to one year. The LDP is usually effective for the HUD program in which the violation occurred and for the geographic jurisdiction of the issuing HUD Office. HUD regulations concerning LDP's are found at 24 CFR 24.700-24.714.

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2. **Debarment and suspensions.** In certain circumstances, HUD may initiate its own debarment or suspension proceedings against a contractor and/or subcontractor in connection with improper actions regarding Davis-Bacon obligations. For example, HUD may initiate debarment where a contractor has been convicted for making false statements (such as false statements on certified payrolls or other prevailing wage certifications) or may initiate suspension where a contractor has been indicted for making false statements. HUD regulations concerning debarment and suspension are found at 24 CFR Part 24.

3-6 FALSIFICATION OF CERTIFIED PAYROLL REPORTS.

Contractors and/or subcontractors that are found to have willfully falsified payroll reports (Statements of Compliance), including correction certified payroll reports, may be subject to civil or criminal prosecution. Penalties may be imposed of \$1,000 and/or one year in prison for each false statement (see Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code).

Remember, if you have any questions or need assistance concerning labor standards requirements help is always available. Contact the contract administrator for the project you're working on or the HUD Field Labor Relations staff in your area.

ACRONYMS AND SYMBOLS

CDBG -	Community Development Block Grant
CFR -	Code of Federal Regulations
CPR -	Certified Payroll Report
CWHSSA -	Contract Work Hours and Safety Standards Act
DBA -	Davis-Bacon Act
DBRA -	Davis-Bacon and Related Acts
DOL -	Department of Labor
FHA -	Federal Housing Administration
FLSA -	Fair Labor Standards Act
HUD -	Housing and Urban Development (Department of)
IHA -	Indian Housing Authority
LCA -	Local Contracting Agency
LDP -	Limited Denial of Participation
O/T -	Overtime
PHA -	Public Housing Agency
S/T -	Straight-time
SAC -	State Apprenticeship Council/Agency
TDHE -	Tribally-Designated Housing Entity
§ -	Section
¶ -	Paragraph

DAVIS-BACON - RELATED WEB SITES*

HUD Office of Labor Relations:

www.hud.gov/offices/olr

HUD Regulations:

<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

HUDClips (HUD Forms and Publications):

www.hud.gov/offices/adm/hudclips/index.cfm

DOL Davis-Bacon and Related Acts Homepage:

<http://www.dol.gov/whd/contracts/dbra.htm>

DOL Regulations:

<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

Davis-Bacon Wage Decisions:

www.wdol.gov

DOL Forms:

www.dol.gov/whd/programs/dbra/forms.htm

***Web addresses active as of January 2012**

Project Wage Rate Sheet			U.S. Department of Housing and Urban Development Office of Labor Relations			
Project Name:				Wage Decision Number/Modification Number:		
Project Number:				Project County:		
Work Classification	Basic Hourly Rate (BHR)	Fringe Benefits	Total Hourly Wage Rate	Laborers Fringe Benefits		\$
Bricklayers			\$	Group #	BHR	Total Wage
Carpenters			\$			\$
Cement Masons			\$			\$
Drywall Hangers			\$			\$
Electricians			\$			\$
Iron Workers			\$			\$
Painters			\$	Operators Fringe Benefits:		\$
Plumbers			\$	Group #	BHR	Total Wage
Roofers			\$			\$
Sheet Metal Workers			\$			\$
Soft Floor Workers			\$			\$
Tapers			\$			\$
Tile Setters			\$	Truck Drivers Fringe Benefits:		\$
Other Classifications				Group #	BHR	Total Wage
			\$			
			\$			
			\$			
Additional Classifications (HUD Form 4230-A)						
Work Classification	Basic Hourly Rate (BHR)	Fringe Benefits	Total Hourly Wage Rate	Date of HUD Submission to DOL		Date of DOL Approval
			\$			
			\$			
			\$			



Rev. Dec. 2008

OMB No.: 1215-0149
Expires: 12/31/2011

NAME OF CONTRACTOR <input type="checkbox"/>	OR SUBCONTRACTOR <input type="checkbox"/>	ADDRESS	OMB No.: 1215-0149 Expires: 12/31/2011
PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	
PROJECT OR CONTRACT NO.			

[illegible]

While completion of Form WH-347 is optional, it is mandatory for covered contractors performing work on Federally financed or assisted construction projects to respond to the information collection contained in 28 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) requires contractors performing work on Federally financed or assisted construction projects to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid "not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine if employees have been legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W., Washington, D.C. 20210

(over)

Date _____

I, _____ (Name of Signatory Party) _____ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ (Contractor or Subcontractor) _____ on the _____
 _____ (Building or Work) _____; that during the payroll period commencing on the _____

_____ day of _____, and ending the _____ day of _____,
 all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ (Contractor or Subcontractor) _____ from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ - in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ - Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	

U.S. Department of Housing and Urban Development
Office of Departmental Operations and Coordination
Washington, DC 20410

Email: www.OfficeofLaborRelations@hud.gov

Labor Relations Desk Guide
LR01.DG



Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development

Applicability

The Project or Program to which the Construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A.1. (i) Minimum Wages. All laborers and mechanics employed or working up on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project) will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than weekly

period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification or work actually performed, without regard to skill, excepts as provided in 29 CFR Part 5.5 (a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFT part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is

necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor,

or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much that the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract. HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic record relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security

number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonable anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) or the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor or owner, as the case may be,

for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-34 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), Government Printing Office, Washington, Dc 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5(a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage

determination incorporated into the contract.

(c) The weekly submission of a property executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph AA.3. (ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3. (i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4. (i) Apprentices and Trainees. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training

Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprentice program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the

applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the even the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the

trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirement of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor will insert in any

subcontract the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all contract clauses in 29 CFR Part 5.5

7. Contracts termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor as provided in 29 CFR 5.12

8. Compliance with Davis-Bacon and Related Act Requirements. All ruling and interpretations of the Davis-Bacon and Related Act contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering in to this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded

HUD contracts or participate in HUD programs pursuant to 24 CFR part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act of 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty to making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transaction", provides in part: "Whoever, for the purpose of ...influencing in any way the action of such Administration...makes, utter or publishes any statement, knowing the same to be false...shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting

for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) or this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages for liquidated damages. HUD or its designees shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold of cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract

or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidates damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surrounding or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly Part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96).

(3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will

be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

EPA Project Control Number

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31 U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Typed Name & Title of Authorized Representative

Signature and Date of Authorized Representative

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

Approved by OMB

0348-0046

(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance		2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award		3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____	
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: Congressional District, if known:			5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known:		
6. Federal Department/Agency:			7. Federal Program Name/Description: CFDA Number, if applicable: _____		
8. Federal Action Number, if known:			9. Award Amount, if known: \$ _____		
10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):			b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):		
11. ation requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.			Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____		
Federal Use Only:				Authorized for Local Reproduction Standard Form LLL (Rev. 4/2012)	

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES	You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.
OVERTIME	You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.
ENFORCEMENT	Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.
APPRENTICES	Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.
PROPER PAY	If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:
1-866-4-USWAGE
(1-866-487-9243) TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND RATE

CHECK APPROPRIATE BOX

☐ SERVICE CONTRACT☐ CONSTRUCTION CONTRACT

OMB No.: 9000-0089

Expires: 02/28/96

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (VRS), Office of Federal Acquisition Policy, GSA, Washington, DC 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0089), Washington, DC 20503.

NOTE: THE CONTRACTOR SHALL COMPLETE ITEMS 3 THROUGH 16 AND SUBMIT THE REQUEST, IN QUADRUPPLICATE, TO THE CONTRACTING OFFICER

1. TO: ADMINISTRATOR, Employment Standards Administration WAGE AND HOUR DIVISION U.S. DEPARTMENT OF LABOR WASHINGTON, D.C. 20210		2. FROM: (REPORTING OFFICE)		
3. CONTRACTOR				4. DATE OF REQUEST
5. CONTRACT NUMBER	6. DATE BID OPENED (SEALED BIDDING)	7. DATE OF AWARD	8. DATE CONTRACT WORK STARTED	9. DATE OPTION EXERCISED (IF APPLICABLE) (SCA ONLY)
10. SUBCONTRACTOR (IF ANY)				
11. PROJECT AND DESCRIPTION OF WORK (ATTACH ADDITIONAL SHEET IF NEEDED)				

12. LOCATION (CITY, COUNTY AND STATE)

13. IN ORDER TO COMPLETE THE WORK PROVIDED FOR UNDER THE ABOVE CONTRACT, IT IS NECESSARY TO ESTABLISH THE FOLLOWING RATE(S) FOR THE INDICATED CLASSIFICATION(S) NOT INCLUDED IN THE DEPARTMENT OF LABOR DETERMINATION

NUMBER: _____

DATED: _____

a. LIST IN ORDER: PROPOSED CLASSIFICATION TITLES(S); JOB DESCRIPTION(S); DUTIES; AND RATIONALE FOR PROPOSED CLASSIFICATIONS (SCA ONLY)

b. WAGE RATE(S)

c. FRINGE BENEFITS PAYMENTS

(Use reverse or attach additional sheets, if necessary)

14. SIGNATURE AND TITLE OF SUBCONTRACTOR REPRESENTATIVE (IF ANY)

15. SIGNATURE AND TITLE OF PRIME CONTRACTOR REPRESENTATIVE

16. SIGNATURE OF EMPLOYEE OR REPRESENTATIVE

TITLE

CHECK APPROPRIATE BOX-REFERENCING BLOCK 13.

☐ AGREE☐ DISAGREE

TO BE COMPLETED BY CONTRACTING OFFICER (CHECK AS APPROPRIATE - SEE FAR 22.1019 (SCA) OR FAR 22.406-3 (DBA))

☐ THE INTERESTED PARTIES AGREE AND THE CONTRACTING OFFICER RECOMMENDS APPROVAL BY THE WAGE AND HOUR DIVISION. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.

☐ THE INTERESTED PARTIES CANNOT AGREE ON THE PROPOSED CLASSIFICATION AND WAGE RATE. A DETERMINATION OF THE QUESTION BY THE WAGE AND HOUR DIVISION IS THEREFORE REQUESTED. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.

(Send copies 1, 2, and 3 to Department of Labor)

SIGNATURE OF CONTRACTING OFFICER OR REPRESENTATIVE

TITLE AND COMMERCIAL TELEPHONE NO.

DATE SUBMITTED

LABOR STANDARDS INTERVIEW

CONTRACT NUMBER			EMPLOYEE INFORMATION			
NAME OF PRIME CONTRACTOR			LAST NAME		FIRST NAME	MI
			STREET ADDRESS			
NAME OF EMPLOYER			CITY		STATE	ZIP CODE
SUPERVISOR'S NAME			WORK CLASSIFICATION		WAGE RATE	
LAST NAME	FIRST NAME	MI				

ACTION

CHECK BELOW

YES	NO
-----	----

Do you work over 8 hours per day?

Do you work over 40 hours per week?

Are you paid at least time and a half for overtime hours?

Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?

WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?

HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?

TOOLS YOU USE

DATE OF LAST WORK DAY BEFORE INTERVIEW (YYMMDD)

DATE YOU BEGAN WORK ON THIS PROJECT (YYMMDD)

THE ABOVE IS CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE

DATE (YYMMDD)

INTERVIEWER SIGNATURE

TYPED OR PRINTED NAME

DATE (YYMMDD)

INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED

ACTION (If explanation is needed, use comments section)

YES	NO
-----	----

IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?

ARE WAGE RATES AND POSTERS DISPLAYED?

FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROLL DATA?

☐ YES

☐ NO

COMMENTS

CHECKER

LAST NAME

FIRST NAME

MI

JOB TITLE

SIGNATURE

DATE (YYMMDD)

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.



Rev. Dec. 2008

NAME OF CONTRACTOR <input type="checkbox"/>	OR SUBCONTRACTOR <input type="checkbox"/>	ADDRESS	OMB No.: 1215-0149 Expires: 12/31/2011
---	---	---------	---

PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
-------------	-----------------	----------------------	-------------------------

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT OR ST.	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS						(9) NET WAGES PAID FOR WEEK		
				HOURS WORKED EACH DAY																		
			O																			
			S																			
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____ on the _____
(Contractor or Subcontractor)
_____ ; that during the payroll period commencing on the _____
(Building or Work)
_____ day of _____, _____, and ending the _____ day of _____, _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said
_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the
classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide
apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of
Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a
State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:
(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ — in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such
employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ — Each laborer or mechanic listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE
31 OF THE UNITED STATES CODE.



Borrower _____

Weekly Payroll Labor Standards Compliance Review

Project Name _____ **Project #** _____

Name of Prime Contractor: _____

Subcontractor (if applicable): _____

IRS Employers ID Number: _____

Payroll Period: From _____ **to** _____

Date Submitted: _____

Date Reviewed : _____

Reviewed By: _____

Payroll and Statement of Compliance Properly Completed?: _____ Yes _____ No

Findings: _____

Job Classification

Wage and Fringe Paid

Determination Rate

\$ _____

\$ _____

Compliance Determination: _____ Yes _____ No **Follow-up Actions:** _____

Signature of Reviewer

Date

General Decision Number: ME170104 08/11/2017 ME104

State: Maine

Construction Type: Heavy

Counties: Franklin, Knox and Lincoln Counties in Maine.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 08/11/2017

ENGI0004-002 12/01/2016

	Rates	Fringes
--	-------	---------

POWER EQUIPMENT OPERATOR

(Backhoe, Bulldozer, Excavator, Loader, Trackhoe).....	\$ 34.17	25.91
---	----------	-------

LAB00327-001 12/01/2016

	Rates	Fringes
--	-------	---------

LABORER: Common or General.....	\$ 17.55	15.47
---------------------------------	----------	-------

LAB00327-002 12/01/2016

	Rates	Fringes
--	-------	---------

LABORER (Flagger).....	\$ 17.45	8.25
------------------------	----------	------

SUME2014-009 01/30/2017

	Rates	Fringes
--	-------	---------

CARPENTER, Includes Form Work....	\$ 20.04	10.48
-----------------------------------	----------	-------

ELECTRICIAN.....	\$ 24.94	9.00
------------------	----------	------

IRONWORKER, STRUCTURAL.....	\$ 24.57	11.13
-----------------------------	----------	-------

LABORER: Pipelayer.....	\$ 21.96	5.99
-------------------------	----------	------

OPERATOR: Crane.....	\$ 24.57	6.89
----------------------	----------	------

TRUCK DRIVER: Dump Truck.....	\$ 15.40	3.09
-------------------------------	----------	------

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION



Disadvantaged Business Enterprise Program DBE Subcontractor Performance Form

NAME OF SUBCONTRACTOR ¹	PROJECT NAME
ADDRESS	BID/PROPOSAL NO.
TELEPHONE NO.	EMAIL ADDRESS
PRIME CONTRACTOR NAME	

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR

Currently certified as an MBE or WBE under EPA's DBE Program? _____ Yes _____ No

Signature of Prime Contractor _____ Date _____

Printed Name & Title _____

Signature of Subcontractor _____ Date _____

Printed Name & Title _____

¹Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Disadvantaged Business Enterprise Program DBE Subcontractor Participation Form

NAME OF SUBCONTRACTOR ¹	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	EMAIL ADDRESS
PRIME CONTRACTOR NAME	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR

 Subcontractor Signature

 Date

 Printed Name & Title

¹Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Disadvantaged Business Enterprise Program DBE Subcontractor Utilization Form

BID/PROPOSAL NO.	PROJECT NAME
NAME OF PRIME BIDDER/PROPOSER	EMAIL ADDRESS
ADDRESS	
TELEPHONE NO.	FAX NO.

The following subcontractors ¹ will be used on this project:			
COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATE DOLLAR AMOUNT	CURRENTLY CERTIFIED AT AN MBE OR WBE
<p>I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c).</p> <p>Signature of Prime Contractor _____ Date _____</p> <p>Printed Name & Title _____</p>			

¹Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



**STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CWSRF DBE PROGRAM**

PROGRESS REPORT OF DBE SUBCONTRACTOR UTILIZATION FORM

TO INSURE PROMPT PAYMENT THE FOLLOWING INFORMATION MUST BE SUBMITTED WITH ALL REIMBURSEMENT REQUESTS WHETHER THEY INCLUDE INVOICED AMOUNTS FROM A QUALIFYING WBE OR MBE PARTICIPANT OR NOT:

Municipality/District: _____ SRF #: _____

Name of Project: _____ Contractor: _____

Contractor's Payment Request No. _____ Period covered by the request _____

The accompanying Reimbursement Request includes the following WBE/MBE participation:

Name & Address of WBE/MBE firm to be paid	WBE	MBE	Source of Certification, i.e., DOT, EPA or SBA	Amount to be paid this request	Type of Work

This attachment must be signed by an authorized representative of the contractor.

Signature _____ Date _____

Name: _____ Title: _____

Address: _____

Phone: _____ E-Mail: _____

DOCUMENT 002513 - PREBID MEETING

1.1 PREBID MEETING

- A. The Owner and Engineer will conduct a Pre-bid meeting as indicated below:
 - 1. Meeting Date: **Thursday, November 2, 2017**
 - 2. Meeting Time: **10:00 a.m., local time.**
 - 3. Location: **Former Forster Mill, 581 Depot Street, Wilton, Maine.**
- B. Attendance:
 - 1. Prime Bidders: Attendance at Pre-bid meeting is recommended.
 - 2. Subcontractors: Attendance at Pre-bid meeting is recommended.
- C. Bidder Questions: Submit written questions to be addressed at Pre-bid meeting minimum of two business days (48 hours) prior to meeting.
- D. Agenda: Pre-bid meeting agenda will include review of topics that may affect proper preparation and submittal of bids, including the following:
 - 1. Procurement and Contracting Requirements:
 - a. Instructions to Bidders.
 - b. Bidder Qualifications.
 - c. Bonding.
 - d. Insurance.
 - e. Bid Security.
 - f. Bid Form and Attachments.
 - g. Bid Submittal Requirements.
 - h. Minority and Woman Business Enterprises
 - i. Davis Bacon Requirements
 - j. Bid Submittal Checklist.
 - k. Notice of Award.
 - 2. Communication during Bidding Period:
 - a. Obtaining documents.
 - b. Bidder's Requests for Information.
 - c. Addenda.
 - 3. Contracting Requirements:
 - a. Agreement.
 - b. The General Conditions.
 - c. The Supplementary Conditions.
 - d. Other Owner requirements.

4. Construction Documents:
 - a. Scopes of Work.
 - b. Temporary Facilities.
 - c. Use of Site.
 - d. Work Restrictions.
 - e. Substitutions Following Award/Change Orders.
 5. Schedule:
 - a. Project Schedule.
 - b. Contract Time.
 - c. Other Bidder Questions.
 6. Site/facility visit or walkthrough.
 7. Post-Meeting Addendum.
- E. Minutes: Engineer shall record and distribute meeting minutes to attendees and others known by the Engineer to have received a complete set of Procurement and Contracting Documents. Minutes of meeting are issued as Available Information and do not constitute a modification to the Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents are issued by written Addendum only.
1. Sign-in Sheet: Minutes will include list of meeting attendees.
 2. List of Plan holders: Minutes will include list of plan holders.

END OF DOCUMENT 002513

DOCUMENT 003113 - PRELIMINARY SCHEDULE

1.1 PROJECT SCHEDULE

- A. This Document is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but do not affect Contract Time requirements. This Document and its attachments are not part of the Contract Documents.
- B. Preliminary project schedule including design and construction milestones is as follows:
 - 1. Advertisement for Bids – Week of October 16, 2017
 - 2. Pre-Bid Contractor Site Walk – November 2, 2017 at 10:00 AM
 - 3. Contractor Bids Due – November 17, 2017 at 2:00 PM
 - 4. Contractor Selection – November 20, 2017
 - 5. *Public Meeting (Attendance by Contractor is Strongly Encouraged) – November 21, 2017*
 - 6. Commencement of Work (Asbestos Abatement) – Week of November 27, 2017
 - 7. Asbestos Abatement Substantial Completion – January 5, 2018
 - 8. Asbestos Abatement Final Completion – January 19, 2018
 - 9. Commencement of Work (Demolition) – January 22, 2018 (no later than April 30, 2018)
 - 10. Demolition Substantial Completion – To be negotiated between Contractor and Owner based upon established extents of work.
- C. Related Requirements:
 - 1. Document 004113 "Bid Form" for Contract Time.
 - 2. Section 011000 "Summary" for construction requirements.
 - 3. Section 013200 "Construction Progress Documentation" for Contractor's construction schedule requirements.
 - 4. Section 017700 "Closeout Procedures" for closeout procedures.

END OF DOCUMENT 003113

DOCUMENT 003126 - EXISTING HAZARDOUS MATERIAL INFORMATION

1.1 EXISTING HAZARDOUS MATERIAL INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.
- B. Hazardous Building Materials Survey, Rev. 1, prepared by Ransom Consulting, Inc., dated June 29, 2015, is appended to this document. This survey included inspection and sampling for asbestos-containing materials, a survey of lead-based paint, and an evaluation of other hazardous and potentially hazardous building components (aka "universal" wastes).
 - 1. Universal and hazardous wastes referenced in this Hazardous Building Materials Survey have been previously removed from Site.
 - 2. Asbestos containing building materials in the boiler room have been previously abated and removed from Site.
- C. An Asbestos Consulting Services Letter, prepared by TRC Environmental Corporation, dated December 8, 2015, is appended to this document. This memo documents inspection and sampling of the building roofing materials for the presence of asbestos containing materials.
- D. Relevant Portions of a Supplemental Phase II Environmental Site Assessment, Rev. 1, prepared by Ransom Consulting, Inc., dated March 22, 2017, is appended to this document. As part of this assessment, samples were collected of the building roofing materials to determine the presence and extent of asbestos containing building materials present.
- E. Related Requirements:
 - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
 - 2. Section 024116 "Structure Demolition" for notification requirements if materials suspected of containing hazardous materials are encountered.

END OF DOCUMENT 003126

June 29, 2015

Project 131.06099.005

Ms. Tracy Kelly
Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, Maine

RE: Hazardous Building Materials Survey, Rev. 1
Forster Manufacturing
81 Depot Street
Wilton, Maine

Dear Ms. Kelly:

Ransom Consulting, Inc. (Ransom) has prepared this report presenting the results of the Hazardous Building Materials Survey (HBMS) performed at the former Forster Manufacturing property, located at 81 Depot Street in Wilton, Maine (the Site). The work was authorized by the Maine Department of Environmental Protection (MEDEP), and was performed in accordance with the fully executed MEDEP *Request For Bids (RFB) #62– Phase I Environmental Site Assessment & Hazardous Building Materials* dated April 22, 2015. The HBMS included inspection and sampling for asbestos-containing materials, a survey of lead-based paint, and an evaluation of other hazardous and potentially hazardous building components (aka “universal” wastes).

The purpose of the HBMS is to provide information pertinent to renovation or demolition projects involving the site structures. Spreadsheets showing the tabulated results of asbestos and paint chip analytical testing, a visual inventory of universal wastes, and anticipated budgetary costs for removal and disposal of hazardous building materials are provided in Tables 1 through 3. Generalized floor plans for the Site building, including locations of samples testing positive for asbestos, are provided in Figures 1 through 4. A photograph log documenting our key findings is included as Attachment A.

Ransom conducted our HBMS on May 7 and May 15, 2015, and was accompanied by Ms. Tracy Kelly and Mr. John Bucci of MEDEP on May 7, 2015. Based on the results of our inspection, Ransom draws the following conclusions:

1. Asbestos-containing materials were identified at the Site. Materials identified as asbestos-containing material (ACM) that may be impacted by future renovation or demolition of the Site building should be properly removed prior to such activities. Due to access and safety limitations, asphalt-based roofing materials were identified as presumed asbestos-containing materials (PACM). Results of asbestos testing and abatement cost estimates are provided in Table 1;

2. A dumpster with asbestos placards and apparent ACM waste was observed in the parking area immediately east of the Site Building during our inspection. According to communications with Ms. Rhonda Irish, Town Manager for the Town of Wilton, this dumpster has been removed and ACM has been properly disposed of, as of the date of this report.
3. Some of the painted surfaces tested on the interior and exterior of the Site building contained lead at high enough concentrations to delineate the materials as “lead-based” according to United States Housing and Urban Development (HUD) guidelines. These guidelines apply to federal housing projects and are referenced for comparison purposes only, and are not a regulatory consideration in this scenario. General and/or demolition contractors may perform demolition of surfaces coated with lead based paint (LBP) or lead-containing coatings, provided that the handling of components coated with paint containing lead *at any concentration* (referred to as lead-containing paint) complies with Occupational Safety and Health Administration’s (OSHA’s) lead standards. LBP testing results are provided in Table 2; and
4. Ransom inventoried additional hazardous or potentially hazardous building fixtures at the Site during the course of this investigation that may contain polychlorinated biphenyls (PCBs) and heavy metals. Disposal of each of these items is also subject to hazardous and/or universal waste disposal requirements. An inventory of universal wastes identified during this HBMS and associated removal cost estimates are provided in Table 3.

LIMITATIONS

This hazardous building materials survey is subject to certain limitations, which must be considered when interpreting the results. The information presented in this report is based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. No survey will definitively identify all hazardous materials within a building. Additional materials may be present that were not identified during our survey due to hidden conditions or other limitations on our inspection. Conclusions represent the professional judgment of Ransom based on the data obtained from the work and the site conditions encountered at the time the work was performed and are not to be construed as legal advice.

In addition to these general stipulations, additional site-specific limitations are as follows:

1. Due to access limitations and safety concerns, asphalt-based roofing materials were not sampled for potentially asbestos-containing materials. These materials are presented as PACM, and should be treated as ACM unless/until thorough sampling and laboratory analysis demonstrate that they are not ACM; and
2. Our inspection was conducted on behalf of MEDEP, and is representative of conditions observed at the time of this report. No reliance shall be made by other users, for additional purposes, or for future demolition/ renovation projects at the Site building.

Ms. Tracy Kelly
Maine Department of Environmental Protection

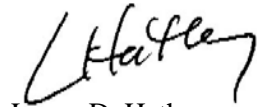
Cost estimates assume that all identified ACM will be abated, regardless of whether the building will be demolished or retained. If the building is to remain, then intact ACM may be managed in place, and may not require removal, as long as it remains intact, undamaged, and in good condition.

The cost estimates presented are not intended to be quotes for these services, rather engineering cost estimates for project planning purposes. Ransom recommends that competitive contractor bids be solicited for proper abatement and/or disposal of the identified hazardous materials.

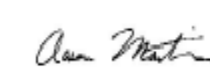
If you have any questions regarding the information in this report please do not hesitate to contact any of the undersigned.

Sincerely,

RANSOM CONSULTING, INC.

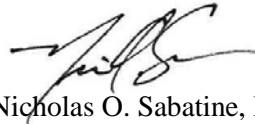


Lucas D. Hathaway
Project Scientist



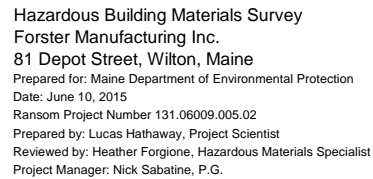
Aaron Martin
2015-06-29
15:51-04:00

Heather R. Forgione
Hazardous Materials Specialist



Nicholas O. Sabatine, P.G.
Vice President

LDH/HRF/NOS:lrk
Attachments



Sample ID	Material	Location	Laboratory Analytical Result	Approximate Quantity	Unit Cost	Removal Cost	Notes
01A	Cement cylinder and cap	Photo building	35% Chrysotile	1 Each (4 LF)			1
01B			NA/PS				
01C							
02A	Window glaze	Photo building	0.02% Chrysotile	480 Each			2
02B		Original/wood section	NAD				
02C		Original/wood section	3.81% Chrysotile				
03A	Red siding paper	Original/wood section	NAD				3
03B							
03C							
04A	Window caulk	Main Mill Building - wood section	NAD				
04B							
04C							
05A	Black siding paper	Main Mill Building - wood section	NAD				
05B							
05C							
06A	Window glaze	Rear wood addition	4.95% Chrysotile	5 Each			
06B			NA/PS				
06C							
07A	Interior window glaze	Back brick section, 1st floor	NAD				
07B							
07C							
08A	Interior window glaze	Back brick section, 2nd floor	NAD				
08B							
08C							
09A	Interior window glaze	Partial demo brick section	2.35% Chrysotile	66 Each			
09B			NA/PS				
09C							
10A	Interior window glaze	Brick stair tower	NAD				
10B							
10C							
11A	Drywall	Basement ceiling	NAD				
11B							
11C							
12A	Cement board pieces	Overhead beams - basement	35% Chrysotile	150 SF			4
12B		Window panel - basement					
12C		Overhead beams - first floor	NA/PS				
13A	Cement paneling	Electrical room - basement	55% Chrysotile	100 SF			
13B			NA/PS				
13C							
14A	Cement paneling	Vertical shaft interior	35% Chrysotile	1,700 SF			5
14B			NA/PS				
14C							
15A	Wall paneling	Elevator car - basement SE	NAD				
15B							
15C							
16A	Brown sheet flooring	1st floor bath	35% Chrysotile	180 SF			
16B			NA/PS				
16C							
17A	Gray 12-inch floor tile	2nd floor bath/office	NAD				
17B							
17C							
18A	Red 12-inch floor tile	2nd floor bath/office	NAD				
18B							
18C							

Sample ID	Material	Location	Laboratory Analytical Result	Approximate Quantity	Unit Cost	Removal Cost	Notes
19A	Brick pattern sheet floor	2nd floor bath/office	NAD				
19B							
19C							
20A	Drywall	2nd floor office area	NAD				
20B		3rd floor office area					
20C		3rd floor office area					
21A	Joint Compound	2nd floor office area	NAD				
21B		3rd floor office area					
21C		3rd floor office area					
22A	Cement panel flooring	2nd floor bath/office	35% Chrysotile	400 SF			
22B		2nd floor bath/office	NA/PS				
22C		2nd floor east end					4
23A	Layer 1: Base coat plaster	2nd floor - central brick section	NAD				
	Layer 2: Skim coat plaster						
23B	Layer 1: Base coat plaster						
	Layer 2: Skim coat plaster						
23C	Layer 1: Base coat plaster						
	Layer 2: Skim coat plaster						
23D	Layer 1: Base coat plaster						
	Layer 2: Skim coat plaster						
23E	Layer 1: Base coat plaster						
	Layer 2: Skim coat plaster						
24A	12-inch floor tile mastic	2nd floor	NAD				
24B							
24C							
25A	Residual 9-inch floor tile mastic	3rd floor SE	NAD				
25B							
25C							
26A	Pebble pattern sheet floor	3rd floor	35% Chrysotile	1,200 SF			
26B			NA/PS				
26C							
27A	Black stripe pattern 12-inch floor tile	3rd floor	NAD				
27B							
27C							
28A	Small-diameter pipe insulation	Boiler room	35% Chrysotile	200 LF			
28B			NA/PS				
28C							
29A	Ceiling plaster	Boiler room	NAD				
29B							
29C							
29D							
29E							
30A	Boiler gasket	Boiler room	85% Chrysotile	3 Each			
30B			NA/PS				
30C							
31A	Thermal jacketing - wood boiler	Boiler room	NAD	1 Each			6
31B			Not received				
31C			Not received				
32A	Thermal jacketing - oil boilers	Boiler room	20% Chrysotile	2 Each			
32B			NA/PS				
32C							
33A	Large-diameter pipe insulation	Boiler room	45% Chrysotile	200 LF			
33B			NA/PS				
33C							
NS	Asphalt-based roofing	Throughout	PACM	100,000 SF			7, 8, 9, 10
NS	Metal-clad fire doors	Throughout	PACM	60 Each			
					Subtotal:		
					Contingency:		11
					Asbestos Total:		

- 1: NA/PS = Not Analyzed/Positive Stop
- 2: Sample set of window glaze associated with wood window sashes indicates heterogeneity of material. Quantity of ACM may be reduced by supplemental inspection and sampling.
- 3: NAD = No Asbestos Detected
- 4: Materials considered homogeneous with "A" sample
- 5: Higher than typical unit cost removed due to difficulty of removal
- 6: 31B and 31C samples reported as "not received" by lab. This material is treated as ACM until/unless complete sample set is re-collected and tests negative.
- 7: NS = Not Sampled. PACM = Presumed asbestos-containing materials. Budgetary costs are carried to remove and dispose as ACM until laboratory testing can demonstrate otherwise.
- 8: Asphalt-based roofing materials were not sampled due to access/safety concerns. Roofing materials should be sampled for asbestos content during demolition phase, in order to determine proper handling and disposal methods.
- 9: Unit cost for roofing removal based on work conducted by asbestos abatement firm. A cost savings may be achieved by conducting removal using properly trained roofing or demolition firm.
- 10: Quantity based on measurements taken from aerial photography of Site building.
- 11: A 5% contingency is applied to cover the cost of potential hidden conditions, and/or variation in industry pricing for removal and disposal.



Hazardous Building Materials Survey
 Forster Manufacturing Inc.
 81 Depot Street, Wilton, Maine
 Prepared for: Maine Department of Environmental Protection
 Date: June 10, 2015
 Ransom Project Number 131.06009.005.02
 Prepared by: Lucas Hathaway, Project Scientist
 Reviewed by: Heather Forgione, Hazardous Materials Specialist
 Project Manager: Nick Sabatine, P.G.

TABLE 2: SUMMARY OF LEAD-BASED PAINT TESTING

Sample ID	Color/Substrate/Component	Location	Laboratory Analytical Result	Notes
Pb-01	Red Wood Clapboard	Photo building exterior	13	1
Pb-02	Red Wood Clapboard	Main Mill Building exterior	19	
Pb-03	Green Wood Window casing	Main Mill Building exterior	21	
Pb-04	White Wood Window ledge	Main Mill Building exterior	4	
Pb-05	White Wood Overhead door	Loading Dock	0.011	
Pb-06	White Wood Corner trim	Main Mill Building exterior	1.9	
Pb-07	Green Wood Window sash	Main Mill Building exterior	3.7	
Pb-08	White Brick wall	Interior - Basement	0.038	
Pb-09	White Wood Carrying beam	Interior - Basement	0.23	
Pb-10	Gray Steel Column	Interior - Basement	0.47	
Pb-11	Blue Brick Wall	Interior - First Floor	<0.01	
Pb-12	Orange Steel Column	Interior - First Floor	16	
Pb-13	Green Wood Column	Interior - First Floor	0.021	
Pb-14	White Wood Ceiling	Interior - First Floor	<0.01	
Pb-15	Brown Wood Column	Interior - Second Floor	0.4	
Pb-16	Green Drywall Wall	Interior - Second Floor	<0.01	
Pb-17	White Wood Beam	Interior - Second Floor	0.027	
Pb-18	White Wood Ceiling	Interior - Second Floor	0.059	

1: Total Lead Concentrations in percent by weight.



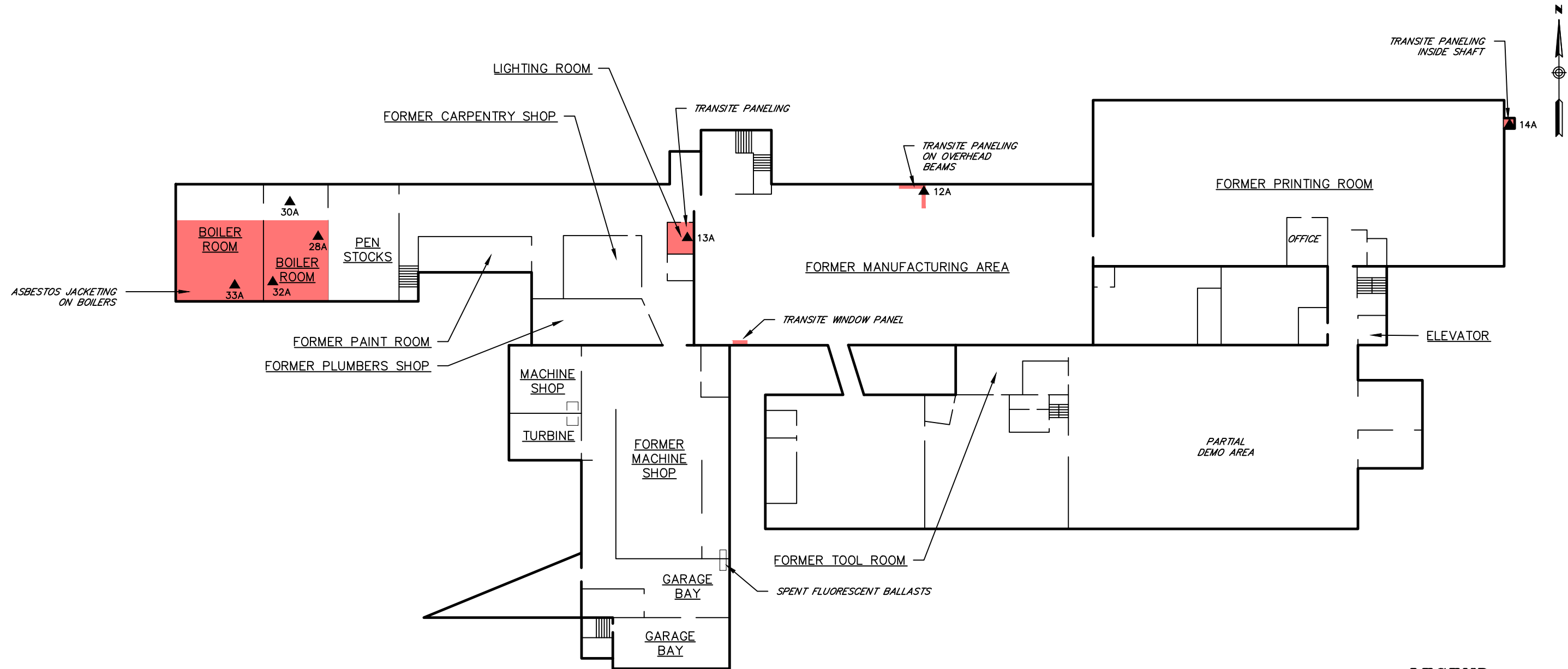
Hazardous Building Materials Survey
Forster Manufacturing Inc.
81 Depot Street, Wilton, Maine
Prepared for: Maine Department of Environmental Protection
Date: June 10, 2015
Ransom Project Number 131.06009.005.02
Prepared by: Lucas Hathaway, Project Scientist
Reviewed by: Heather Forgione, Hazardous Materials Specialist
Project Manager: Nick Sabatine, P.G.

TABLE 3: SUMMARY OF UNIVERSAL WASTE INVENTORY AND COST ESTIMATES

Component	Location	Hazard	Approximate Quantity	Unit Cost	Removal Cost	Notes
Electronic ballast associated w/fluorescent lighting fixtures	Throughout	PCBs	236			1
Fluorescent lamps (includes CFLs)	Throughout	Mercury	120			
Batteries associated w/emergency lighting systems	Throughout	Heavy Metals	31			
				Total:		

1: Represents conservative/worst-case cost assumption.

Ballasts were not checked for PCB labeling. All units should be checked during demolition phase and handled and disposed accordingly.

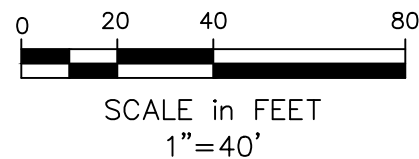


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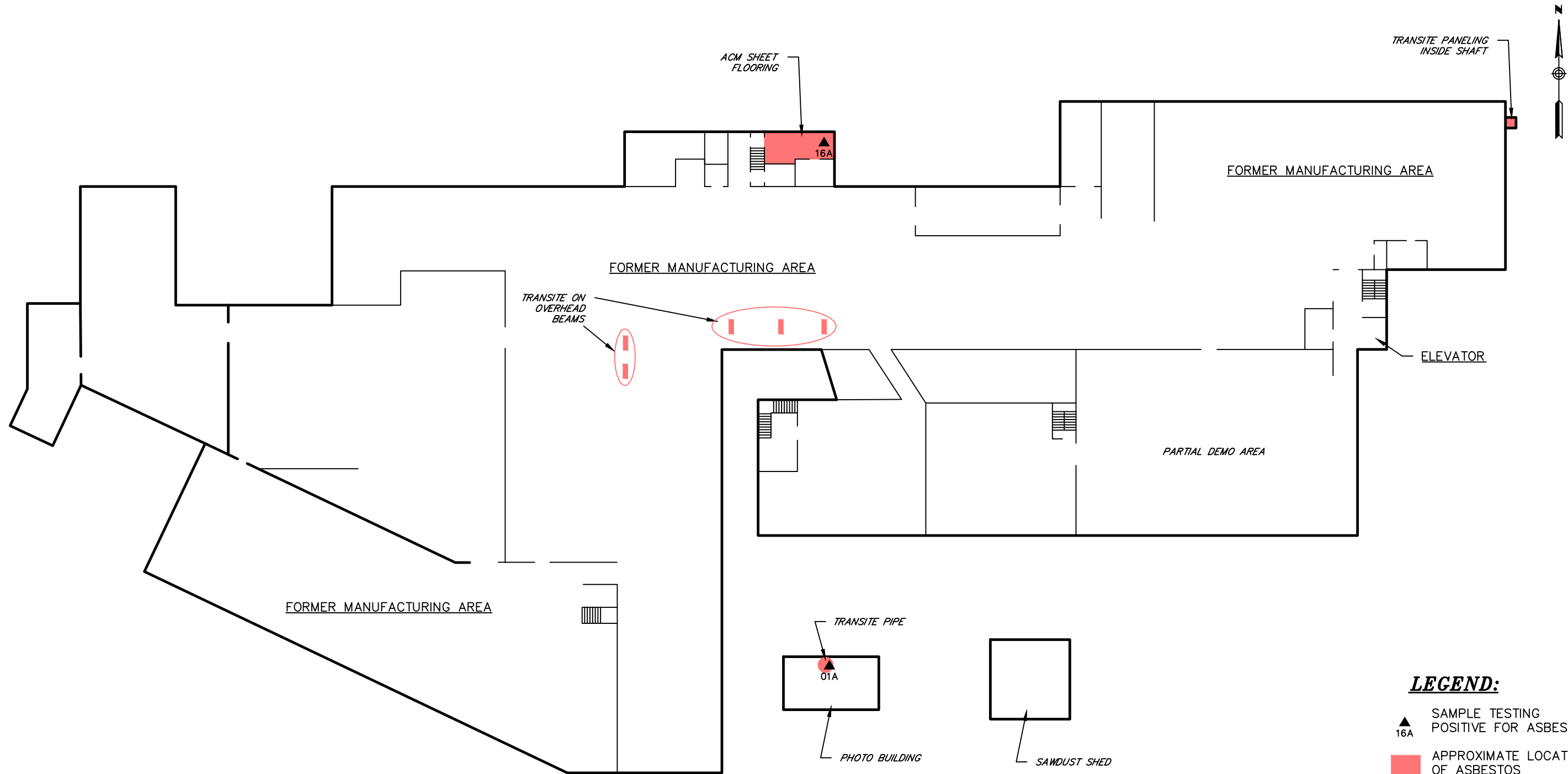
▲ 33A SAMPLE TESTING POSITIVE FOR ASBESTOS

APPROXIMATE LOCATION OF ASBESTOS CONTAINING MATERIALS

- NOTES:**
1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON MAY 7, AND MAY 13, 2015.
 2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
 3. THIS PLAN HAS BEEN PREPARED FOR MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.

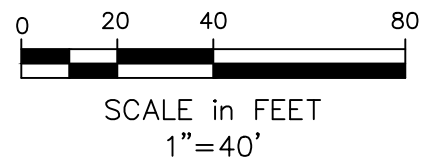


RANSOM Consulting, Inc.		BASEMENT PLAN & INTERIOR OBSERVATIONS	
PREPARED FOR: MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE		SITE: FORSTER MANUFACTURING 81 DEPOT STREET WILTON, MAINE	
		DATE:	JUNE 2015
		PROJECT:	131.06099
		FIGURE:	1



NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON MAY 7, AND MAY 13, 2015.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.



LEGEND:

- ▲ 16A SAMPLE TESTING POSITIVE FOR ASBESTOS
- APPROXIMATE LOCATION OF ASBESTOS CONTAINING MATERIALS



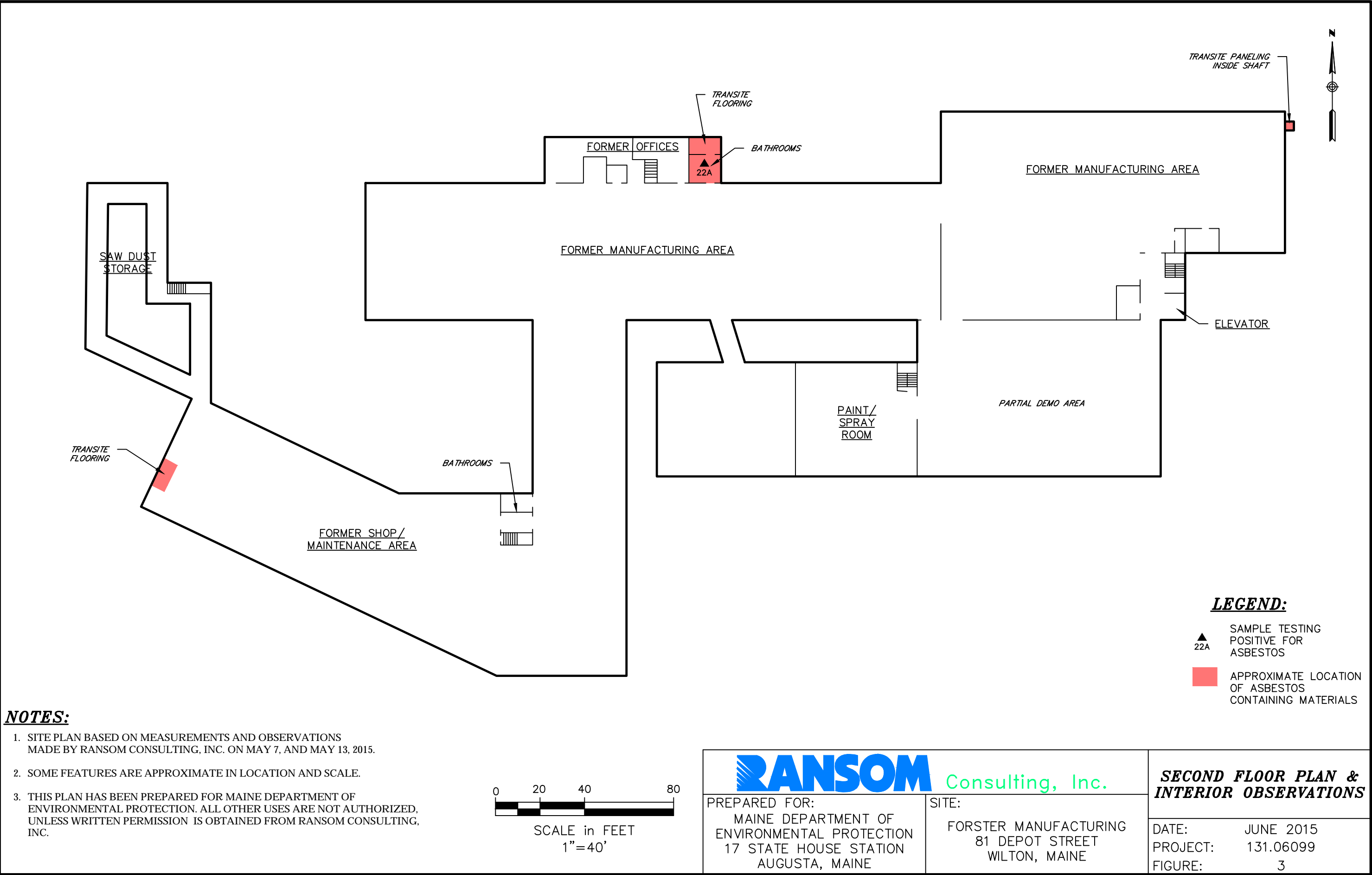
Consulting, Inc.

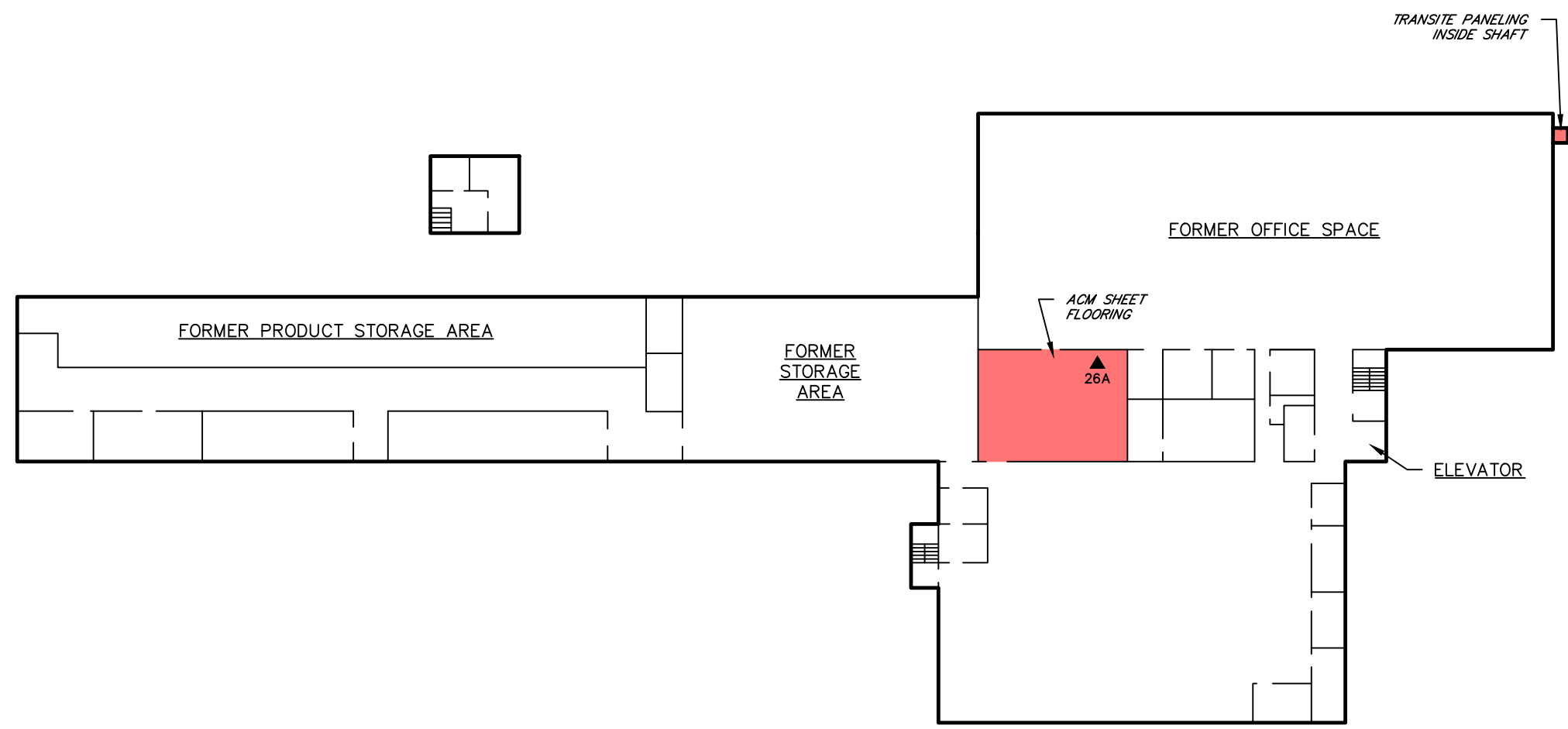
PREPARED FOR:
MAINE DEPARTMENT OF
ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, MAINE

SITE:
FORSTER MANUFACTURING
81 DEPOT STREET
WILTON, MAINE

**FIRST FLOOR PLAN &
INTERIOR OBSERVATIONS**

DATE: JUNE 2015
PROJECT: 131.06099
FIGURE: 2



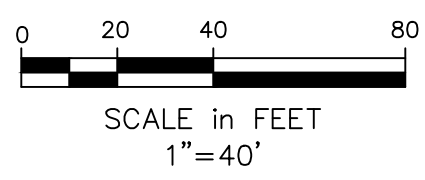


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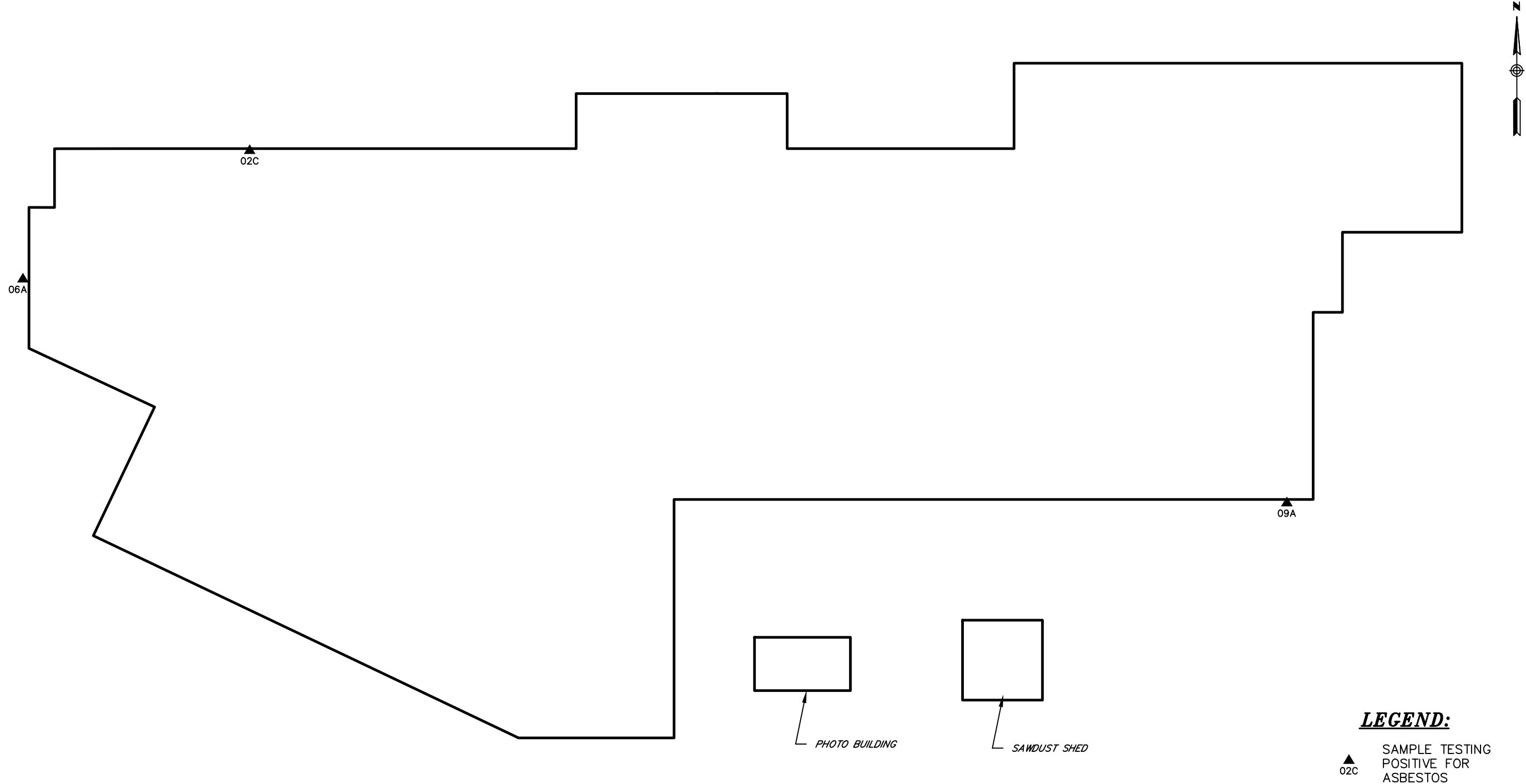
- ▲
26A SAMPLE TESTING
POSITIVE FOR
ASBESTOS
- APPROXIMATE LOCATION
OF ASBESTOS
CONTAINING MATERIALS

NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON MAY 7, AND MAY 13, 2015.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.

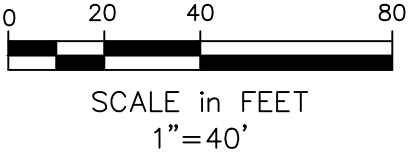


RANSOM Consulting, Inc.		THIRD FLOOR PLAN & INTERIOR OBSERVATIONS	
PREPARED FOR: MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE		SITE: FORSTER MANUFACTURING 81 DEPOT STREET WILTON, MAINE	
		DATE:	JUNE 2015
		PROJECT:	131.06099
		FIGURE:	4



NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON MAY 7 AND MAY 13, 2015.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.



RANSOM Consulting, Inc.		ROOF/EXTERIOR PLAN	
PREPARED FOR: MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE		SITE: FORSTER MANUFACTURING 81 DEPOT STREET WILTON, MAINE	
		DATE:	JUNE 2015
		PROJECT:	131.06099
		FIGURE:	5

ATTACHMENT A

Photograph Log

Hazardous Building Materials Survey
Forster Manufacturing
81 Depot Street
Wilton, Maine

Photograph Log



**View of Site building, from main entrance/parking area.
View is to the east.**



**Asbestos-cement piping and cap observed inside Photo
Building. (Sample set 01)**



**Exterior window glaze on Main Mill Building wood-sash
windows. (Sample set 02)**



**View of several windows on Main Mill with ACM glazing.
(Sample set 03)**



**View of "rear wood addition" including windows with ACM
glazing. (Sample set 06)**



**Steel sash windows with ACM interior glazing on "partial
demo section." (Sample set 09)**



Closer view of ACM window glazing on “partial demo section” steel sash windows.



Small pieces of asbestos-cement board nailed to ceiling in Main Mill Building. (Sample set 12)



Asbestos-cement paneling inside electrical room in Main Mill Building basement. (Sample set 13)



Asbestos-cement paneling lining vertical shaft on Main Mill Building west exterior wall. (Sample set 14)



Brown sheet flooring observed in 1st floor bath. (Sample set 16)



Asbestos-cement board flooring observed in 2nd floor bath. (Sample set 22)

Photograph Log



Pebble pattern sheet flooring observed on Main Mill Building 2nd floor. (Sample set 26)



Large- and small-diameter asbestos-containing pipe insulation observed inside boiler room. (Sample sets 28, 33)



Asbestos-containing gasket observed on one of three boilers. (Sample set 30)



Asbestos-containing jacketing on wood-fired boiler. (Sample set 31/PACM)



Asbestos-containing jacketing on oil-fired boilers. (Sample set 32)



PACM asphalt-containing roofing mixed in with demolition debris at Site.

Photograph Log



One of several PACM fire doors observed throughout the Main Mill Complex.



Steel window sashes presumed from "partial demo section," removed from building and mixed with demolition debris.



Previously abated ACM inside roll-off dumpster onsite. Dumpster reportedly removed prior to this report.



Lead-based paint on wood clapboards on Main Mill Building exterior.



Lead-based paint on exterior window components on Main Mill Building exterior.



Presumed PCB-containing unlabeled electronic ballasts observed inside Main Mill Building.

ATTACHMENT B

Laboratory Reports

Hazardous Building Materials Survey
Forster Manufacturing
81 Depot Street
Wilton, Maine



85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

Lucas Hathaway
Ransom Environmental Consultants, Inc
400 Commercial St
Portland ME 04101

Project #: 131.06099
Laboratory Batch #: 1512166
Date Samples Received: 05/21/2015
Date Samples Analyzed: 05/26/2015
Date of Final Report: 06/01/2015

SAMPLE IDENTIFICATION:

One Hundred Three (103) Bulk samples from Forster Mill - Wilton, ME; submitted by: Lucas Hathaway

These bulk samples were delivered to Optimum Analytical Consulting, LLC for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less than 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

In any given material, fibers with a small diameter (<0.25mm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

Optimum Analytical and Consulting, LLC will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

This report is considered preliminary until signed by the Laboratory Director and Supervisor.

If you have any questions regarding this report, please do not hesitate to contact us.

A handwritten signature in black ink, appearing to read "J. Noel", written over a horizontal line.

Jamie L. Noel
Laboratory Director

A handwritten signature in black ink, appearing to read "K. Scaviola", written over a horizontal line.

Kristina Scaviola
Laboratory Supervisor

NVLAP Lab ID#: 101433-0



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-001 01A	Photo Building Cement Cylinder and Cap, Gray	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	1% 64%
Total % Asbestos:				35.0%	Total % Non-Asbestos: 65.0%	
1512166-002 01B	Photo Building Cement Cylinder and Cap, Gray Note: Positive Stop	LAYER 1 100%				
1512166-003 01C	Photo Building Cement Cylinder and Cap, Gray Note: Positive Stop	LAYER 1 100%				
1512166-004 02A	Photo Building Window Glaze, Gray	LAYER 1 100%	Chrysotile	.02%	Cellulose Fiber Binder/Filler	1% 98.98%
Total % Asbestos:				<1%	Total % Non-Asbestos: 100.0%	
1512166-005 02B	Original/Wood Section Window Glaze, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-006 02C	Original/Wood Section Window Glaze, Gray	LAYER 1 100%	Chrysotile	3.81%	Cellulose Fiber Binder/Filler	1% 95.19%
Total % Asbestos:				3.8%	Total % Non-Asbestos: 96.2%	
1512166-007 03A	Original/Wood Section Red Siding Paper,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	99% 1%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-008 03B	Original/Wood Section Red Siding Paper,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	99% 1%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1512166-009 03C	Original/Wood Section Red Siding Paper,	LAYER 1 100%	None Detected	Cellulose Fiber 99% Binder/Filler 1%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-010 04A	Main Mill Building - Wood Section Window Caulk, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-011 04B	Main Mill Building - Wood Section Window Caulk, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-012 04C	Main Mill Building - Wood Section Window Caulk, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-013 05A	Main Mill Building - Wood Section Black Siding Paper,	LAYER 1 100%	None Detected	Cellulose Fiber 95% Binder/Filler 5%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-014 05B	Main Mill Building - Wood Section Black Siding Paper,	LAYER 1 100%	None Detected	Cellulose Fiber 95% Binder/Filler 5%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-015 05C	Main Mill Building - Wood Section Black Siding Paper,	LAYER 1 100%	None Detected	Cellulose Fiber 95% Binder/Filler 5%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-016 06A	Rear Wood Addition Window Glazing, Gray	LAYER 1 100%	Chrysotile 4.95%	Cellulose Fiber 1% Binder/Filler 94.05%
Total % Asbestos:			5.0%	Total % Non-Asbestos: 95.1%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1512166-017 06B	Rear Wood Addition Window Glazing, Gray Note: Positive Stop	LAYER 1 100%		
1512166-018 06C	Rear Wood Addition Window Glazing, Gray Note: Positive Stop	LAYER 1 100%		
1512166-019 07A	Back Brick Section, 1st Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-020 07B	Back Brick Section, 1st Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-021 07C	Back Brick Section, 1st Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-022 08A	Back Brick Section, 2nd Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-023 08B	Back Brick Section, 2nd Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-024 08C	Back Brick Section, 2nd Floor Interior Window Glaze, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-025 09A	Partial Demo Brick Section Interior Window Glaze, Gray/White	LAYER 1 100%	Chrysotile	2.35%	Cellulose Fiber Binder/Filler	1% 96.65%
Total % Asbestos:				2.4%	Total % Non-Asbestos: 97.7%	
1512166-026 09B	Partial Demo Brick Section Interior Window Glaze, Gray/White Note: Positive Stop	LAYER 1 100%				
1512166-027 09C	Partial Demo Brick Section Interior Window Glaze, Gray/White Note: Positive Stop	LAYER 1 100%				
1512166-028 10A	Brick Stair Tower Interior Window Glaze, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-029 10B	Brick Stair Tower Interior Window Glaze, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-030 10C	Brick Stair Tower Interior Window Glaze, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-031 11A	Basement Ceiling Drywall, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-032 11B	Basement Ceiling Drywall, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-033 11C	Basement Ceiling Drywall, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-034 12A	Overhead Beams - Throughout Cement Board Pieces, Beige	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	2% 63%
Total % Asbestos:			35.0%		Total % Non-Asbestos: 65.0%	
1512166-035 12B	Overhead Beams - Throughout Cement Board Pieces, Beige Note: Positive Stop	LAYER 1 100%				
1512166-036 12C	Overhead Beams - Throughout Cement Board Pieces, Beige Note: Positive Stop	LAYER 1 100%				
1512166-037 13A	Electrical Room - Basement Cement Paneling, Gray	LAYER 1 100%	Chrysotile	55%	Cellulose Fiber Binder/Filler	2% 43%
Total % Asbestos:			55.0%		Total % Non-Asbestos: 45.0%	
1512166-038 13B	Electrical Room - Basement Cement Paneling, Gray Note: Positive Stop	LAYER 1 100%				
1512166-039 13C	Electrical Room - Basement Cement Paneling, Gray Note: Positive Stop	LAYER 1 100%				
1512166-040 14A	Vertical Shaft Interior Cement Paneling, Gray	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	1% 64%
Total % Asbestos:			35.0%		Total % Non-Asbestos: 65.0%	
1512166-041 14B	Vertical Shaft Interior Cement Paneling, Gray Note: Positive Stop	LAYER 1 100%				



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-042 14C	Vertical Shaft Interior Cement Paneling, Gray Note: Positive Stop	LAYER 1 100%				
1512166-043 15A	Elevator Car - Basement SE Wall Paneling, Blue/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-044 15B	Elevator Car - Basement SE Wall Paneling, Blue/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-045 15C	Elevator Car - Basement SE Wall Paneling, Blue/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-046 16A	1st Floor Bath Brown Sheet Flooring,	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	35% 30%
Total % Asbestos:				35.0%	Total % Non-Asbestos: 65.0%	
1512166-047 16B	1st Floor Bath Brown Sheet Flooring, Positive Stop	LAYER 1 100%				
1512166-048 16C	1st Floor Bath Brown Sheet Flooring, Positive Stop	LAYER 1 100%				
1512166-049 17A	2nd Floor Bath/Office Gray 12-inch Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1512166-050 17B	2nd Floor Bath/Office Gray 12-inch Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-051 17C	2nd Floor Bath/Office Gray 12-inch Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-052 18A	2nd Floor Bath/Office Red 12-inch Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-053 18B	2nd Floor Bath/Office Red 12-inch Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-054 18C	2nd Floor Bath/Office Red 12-inch Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-055 19A	2nd Floor Bath/Office Brick Pattern Sheet Floor, Red/Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-056 19B	2nd Floor Bath/Office Brick Pattern Sheet Floor, Red/Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-057 19C	2nd Floor Bath/Office Brick Pattern Sheet Floor, Red/Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%



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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-058 20A	2nd Floor Office Area Drywall, Brown/White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-059 20B	3rd Floor Office Area Drywall, Brown/White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-060 20C	3rd Floor Office Area Drywall, Brown/White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-061 21A	2nd Floor Office Area Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-062 21B	3rd Floor Office Area Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-063 21C	3rd Floor Office Area Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-064 22A	2nd Floor Bath/Office Cement Panel Flooring, Gray	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	1% 64%
Total % Asbestos:			35.0%		Total % Non-Asbestos: 65.0%	
1512166-065 22B	2nd Floor Bath/Office Cement Panel Flooring, Gray Note: Positive Stop	LAYER 1 100%				



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1512166-066 22C	2nd Floor Bath/Office Cement Panel Flooring, Gray Note: Positive Stop	LAYER 1 100%		
1512166-067 23A	2nd Floor - Central Brick Section LAYER 1 Rough Coat Plaster, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 3% Hair 10% Binder/Filler 87%
	LAYER 2 Skim Coat Plaster, White	LAYER 2 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-068 23B	2nd Floor - Central Brick Section LAYER 1 Rough Coat Plaster, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 3% Hair 10% Binder/Filler 87%
	LAYER 2 Skim Coat Plaster, White	LAYER 2 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-069 23C	2nd Floor - Central Brick Section LAYER 1 Rough Coat Plaster, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 3% Hair 10% Binder/Filler 87%
	LAYER 2 Skim Coat Plaster, White	LAYER 2 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-070 23D	2nd Floor - Central Brick Section LAYER 1 Rough Coat Plaster, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 3% Hair 10% Binder/Filler 87%
	LAYER 2 Skim Coat Plaster, White	LAYER 2 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1512166-071 23E	2nd Floor - Central Brick Section			
	LAYER 1	LAYER 1	None Detected	Cellulose Fiber 3%
	Rough Coat Plaster, Gray	100%		Hair 10%
				Binder/Filler 87%
	LAYER 2	LAYER 2	None Detected	Cellulose Fiber 1%
	Skim Coat Plaster, White	100%		Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-072 24A	2nd Floor			
	12-inch Floor Tile Mastic, Tan	LAYER 1	None Detected	Cellulose Fiber 2%
		100%		Binder/Filler 98%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-073 24B	2nd Floor			
	12-inch Floor Tile Mastic, Tan	LAYER 1	None Detected	Cellulose Fiber 2%
		100%		Binder/Filler 98%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-074 24C	2nd Floor			
	12-inch Floor Tile Mastic, Tan	LAYER 1	None Detected	Cellulose Fiber 2%
		100%		Binder/Filler 98%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-075 25A	3rd Floor SE			
	Residual 9-inch Floor Tile Mastic, Black	LAYER 1	None Detected	Cellulose Fiber 5%
		100%		Binder/Filler 95%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-076 25B	3rd Floor SE			
	Residual 9-inch Floor Tile Mastic, Black	LAYER 1	None Detected	Cellulose Fiber 5%
		100%		Binder/Filler 95%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1512166-077 25C	3rd Floor SE			
	Residual 9-inch Floor Tile Mastic, Black	LAYER 1	None Detected	Cellulose Fiber 5%
		100%		Binder/Filler 95%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-078 26A	3rd Floor Pebble Pattern Sheet Floor, Beige	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	35% 30%
Total % Asbestos:				35.0%	Total % Non-Asbestos: 65.0%	
1512166-079 26B	3rd Floor Pebble Pattern Sheet Floor, Beige Note: Positive Stop	LAYER 1 100%				
1512166-080 26C	3rd Floor Pebble Pattern Sheet Floor, Beige Note: Positive Stop	LAYER 1 100%				
1512166-081 27A	3rd Floor Black Stripe Pattern 12-inch Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-082 27B	3rd Floor Black Stripe Pattern 12-inch Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-083 27C	3rd Floor Black Stripe Pattern 12-inch Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1512166-084 28A	Boiler Room Small-Diameter Pipe Insulation, Gray	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	2% 63%
Total % Asbestos:				35.0%	Total % Non-Asbestos: 65.0%	
1512166-085 28B	Boiler Room Small-Diameter Pipe Insulation, Gray Note: Positive Stop	LAYER 1 100%				
1512166-086 28C	Boiler Room Small-Diameter Pipe Insulation, Gray Note: Positive Stop	LAYER 1 100%				



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1512166-087 29A	Boiler Room Ceiling Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-088 29B	Boiler Room Ceiling Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-089 29C	Boiler Room Ceiling Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-090 29D	Boiler Room Ceiling Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-091 29E	Boiler Room Ceiling Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-092 30A	Boiler Room Boiler Gasket, Gray	LAYER 1 100%	Chrysotile	85%	Cellulose Fiber Binder/Filler	10% 5%
Total % Asbestos:			85.0%		Total % Non-Asbestos: 15.0%	
1512166-093 30B	Boiler Room Boiler Gasket, Gray Note: Positive Stop	LAYER 1 100%				
1512166-094 30C	Boiler Room Boiler Gasket, Gray Note: Positive Stop	LAYER 1 100%				



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-095 31A	Boiler Room Thermal Jacketing - Wood Boiler, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Mineral Wool Binder/Filler	2% 15% 5% 78%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1512166-096 31B	Boiler Room Thermal Jacketing - Wood Boiler, Gray Note: Sample Not Received	LAYER 1 100%				
1512166-097 31C	Boiler Room Thermal Jacketing - Wood Boiler, Gray Note: Sample Not Received	LAYER 1 100%				
1512166-098 32A	Boiler Room Thermal Jacketing - Oil Boilers, Gray	LAYER 1 100%	Chrysotile	20%	Cellulose Fiber Fibrous Glass Binder/Filler	5% 35% 40%
Total % Asbestos:				20.0%	Total % Non-Asbestos: 80.0%	
1512166-099 32B	Boiler Room Thermal Jacketing - Oil Boilers, Gray Note: Positive Stop	LAYER 1 100%				
1512166-100 32C	Boiler Room Thermal Jacketing - Oil Boilers, Gray Note: Positive Stop	LAYER 1 100%				
1512166-101 33A	Boiler Room Large-Diameter Pipe Insulation, Gray	LAYER 1 100%	Chrysotile	45%	Cellulose Fiber Binder/Filler	15% 40%
Total % Asbestos:				45.0%	Total % Non-Asbestos: 55.0%	
1512166-102 33B	Boiler Room Large-Diameter Pipe Insulation, Gray Note: Positive Stop	LAYER 1 100%				



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1512166-103 33C	Boiler Room Large-Diameter Pipe Insulation, Gray Note: Positive Stop	LAYER 1 100%				

Approved Signatory:

Approved Signatory:

NVLAP[®]
Lab Code: 101433-0



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

1512166

Client Ransom Consulting, Inc. 400 Commercial St Portland ME 04101
Contact Lucas Hathaway
Phone 207-772-2891
Project Forster Mill
Location Wilton ME
Ransom Client MEDEP
Ransom Project # 131.06099
Sample Date 5/7/15 - 5/13/15
Analysis Bulk PLM/Gravimetric Reduction for asbestos
TAT Standard
Report Results to: lucas.hathaway@ransomenv.com
PO 7893
Notes/Requests Please analyze NOB samples via Gravimetric Reduction, per MEDEP regulations.
Positive Stop

Sample ID	Material	Location
01A	Cement cylinder and cap	Photo building
01B	Cement cylinder and cap	Photo building
01C	Cement cylinder and cap	Photo building
02A	Window glaze	Original/wood section
02B	Window glaze	Original/wood section
02C	Window glaze	Original/wood section
03A	Red siding paper	Original/wood section
03B	Red siding paper	Original/wood section
03C	Red siding paper	Original/wood section
04A	Window caulk	Main Mill Building - wood section
04B	Window caulk	Main Mill Building - wood section
04C	Window caulk	Main Mill Building - wood section
05A	Black siding paper	Main Mill Building - wood section
05B	Black siding paper	Main Mill Building - wood section
05C	Black siding paper	Main Mill Building - wood section
06A	Window glaze	Rear wood addition
06B	Window glaze	Rear wood addition

1512166



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1512166
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DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

1512166

15/21

15/21

15/21

06C	Window glaze	Rear wood addition
07A	Interior window glaze	Back brick section, 1st floor
07B	Interior window glaze	Back brick section, 1st floor
07C	Interior window glaze	Back brick section, 1st floor
08A	Interior window glaze	Back brick section, 2nd floor
08B	Interior window glaze	Back brick section, 2nd floor
08C	Interior window glaze	Back brick section, 2nd floor
09A	Interior window glaze	Partial demo brick section
09B	Interior window glaze	Partial demo brick section
09C	Interior window glaze	Partial demo brick section
10A	Interior window glaze	Brick stair tower
10B	Interior window glaze	Brick stair tower
10C	Interior window glaze	Brick stair tower
11A	Drywall	Basement ceiling
11B	Drywall	Basement ceiling
11C	Drywall	Basement ceiling
12A	Cement board pieces	Overhead beams - throughout
12B	Cement board pieces	Overhead beams - throughout
12C	Cement board pieces	Overhead beams - throughout
13A	Cement paneling	Electrical room - basement
13B	Cement paneling	Electrical room - basement
13C	Cement paneling	Electrical room - basement
14A	Cement paneling	Vertical shaft interior
14B	Cement paneling	Vertical shaft interior
14C	Cement paneling	Vertical shaft interior
15A	Wall paneling	Elevator car - basement SE
15B	Wall paneling	Elevator car - basement SE
15C	Wall paneling	Elevator car - basement SE
16A	Brown sheet flooring	1st floor bath
16B	Brown sheet flooring	1st floor bath
16C	Brown sheet flooring	1st floor bath
17A	Gray 12-inch floor tile	2nd floor bath/office
17B	Gray 12-inch floor tile	2nd floor bath/office
17C	Gray 12-inch floor tile	2nd floor bath/office



OPTIMUM

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CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1512166
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DATE COLLECTED: 05/13/2015
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DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

1512166

12/5
K-7

18A	Red 12-inch floor tile	2nd floor bath/office
18B	Red 12-inch floor tile	2nd floor bath/office
18C	Red 12-inch floor tile	2nd floor bath/office
19A	Brick pattern sheet floor	2nd floor bath/office
19B	Brick pattern sheet floor	2nd floor bath/office
19C	Brick pattern sheet floor	2nd floor bath/office
20A	Drywall	2nd floor office area
20B	Drywall	3rd floor office area
20C	Drywall	3rd floor office area
21A	Joint Compound	2nd floor office area
21B	Joint Compound	3rd floor office area
21C	Joint Compound	3rd floor office area
22A	Cement panel flooring	2nd floor bath/office
22B	Cement panel flooring	2nd floor bath/office
22C	Cement panel flooring	2nd floor bath/office
23A	Skim coat plaster	2nd floor - central brick section
23B	Skim coat plaster	2nd floor - central brick section
23C	Skim coat plaster	2nd floor - central brick section
23D	Skim coat plaster	2nd floor - central brick section
23E	Skim coat plaster	2nd floor - central brick section
24A	12-inch floor tile mastic	2nd floor
24B	12-inch floor tile mastic	2nd floor
24C	12-inch floor tile mastic	2nd floor
25A	Residual 9-inch floor tile mastic	3rd floor SE
25B	Residual 9-inch floor tile mastic	3rd floor SE
25C	Residual 9-inch floor tile mastic	3rd floor SE
26A	Pebble pattern sheet floor	3rd floor
26B	Pebble pattern sheet floor	3rd floor
26C	Pebble pattern sheet floor	3rd floor
27A	Black stripe pattern 12-inch floor tile	3rd floor
27B	Black stripe pattern 12-inch floor tile	3rd floor
27C	Black stripe pattern 12-inch floor tile	3rd floor
28A	Small-diameter pipe insulation	Boiler room
28B	Small-diameter pipe insulation	Boiler room



OPTIMUM

Analytical and Consulting, LLC

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CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1512166
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DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

1512166

12/5
Ker

Boiler room
Boiler room
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Boiler room

Small-diameter pipe insulation
Ceiling plaster
Ceiling plaster
Ceiling plaster
Ceiling plaster
Ceiling plaster
Boiler gasket
Boiler gasket
Boiler gasket
Thermal jacketing - wood boiler
Thermal jacketing - wood boiler
Thermal jacketing - wood boiler
Thermal jacketing - oil boilers
Thermal jacketing - oil boilers
Thermal jacketing - oil boilers
Large-diameter pipe insulation
Large-diameter pipe insulation
Large-diameter pipe insulation

28C
29A
29B
29C
29D
29E
30A
30B
30C
31A
31B
31C
32A
32B
32C
33A
33B
33C



BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: Forster Mill - Wilton, ME

ORDER #: 1512166
PROJECT #: 131.06099
DATE COLLECTED: 05/13/2015
COLLECTED BY: Lucas Hathaway
DATE RECEIVED: 05/21/2015
ANALYSIS DATE: 05/26/2015
REPORT DATE: 06/01/2015
ANALYST: Jamie Noel

PAGE: 20 of 20

Please Reply To:

AMERI Sci

AmeriSci Los Angeles

24416 S. Main Street, Ste 308

Carson, California 90745

TEL: (310) 834-4868 • FAX: (310) 834-4772

FACSIMILE TELECOPY TRANSMISSION

To: Jamie Noel	From:
Optimum Analytical & Consulting	AmeriSci Job #: 415051231
Fax #:	Subject: Lead (paint) 5 day Results
	Client Project: 1512165; MEDEP - Forster Mill
Email: jamie.noel@optimumanalytical.com, kristina.scaviola@optimumanalytical.com	HM1 - Wilton

Date: Tuesday, May 26, 2015

Time: 20:41:34

Number of Pages: 4

(including cover sheet)

Comments:

CONFIDENTIALITY NOTICE: Unless otherwise indicated, the information contained in this communication is confidential information intended for use of the individual named above. If the reader of this communication is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is prohibited. If you have received this communication in error, please immediately notify the sender by telephone and return the original message to the above address via the US Postal Service at our expense. Preliminary data reported here will be verified before final report is issued. Samples are disposed of in 60 days or unless otherwise instructed by the protocol or special instructions in writing. Thank you.

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AmeriSci Job #: 415051231

Lead Analysis Results

Date Received: 05/22/15

Date Analyzed: 05/26/15

Paint

EPA Method 3050B/7000B

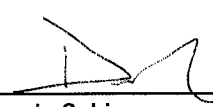
Optimum Analytical & Consulting

Salem, NH

Job Site: 1512165; MEDEP - Forster Mill HM1 - Wilton

AmeriSci #	Client	Sample	% Lead	Lead Content
415051231	Number	Location	(w/w)	(mg/kg = ppm)
01	PB-01	Paint	13	130,000
02	PB-02	Paint	19	190,000
03	PB-03	Paint	21	210,000
04	PB-04	Paint	4.0	40,000
05	PB-05	Paint	0.011	110
06	PB-06	Paint	1.9	19,000
07	PB-07	Paint	3.7	37,000
08	PB-08	Paint	0.038	380
09	PB-09	Paint	0.23	2,300
10	PB-10	Paint	0.47	4,700
11	PB-11	Paint	<0.01	<100
12	PB-12	Paint	16	160,000
13	PB-13	Paint	0.021	210
14	PB-14	Paint	<0.01	<100
15	PB-15	Paint	0.40	4,000
16	PB-16	Paint	<0.01	<100
17	PB-17	Paint	0.027	270
18	PB-18	Paint	0.059	590

AmeriSci Reporting Limit is 0.01%, or 100mg/kg prior to any dilutions due to high analyte concentrations or matrix interferences. AmeriSci does not correct sample results by the blank value. All analytical batch data met quality control criteria unless otherwise noted. CA ELAP No. 2322. AIHA Lab No. 100530.

Reviewed by: Analyzed by: 

Dennis S. Liu

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24416 South Main Street, Suite 308

Carson, CA 90745

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310.834.4868 Phone~310.834.4772 Fax

COMPANY: Optimum Analytical and Consulting, LLC

Address: 85 Stiles Road Suite 201, Salem NH 03079

PHONE: 603-458-5247

FAX 1:

FAX 2:

CLIENT
 Jamie Noel, Kristina Scaviola

EMAIL: jamie.noe@optimumanalytical.com

Kristina.Scaviola@optimumanalytical.com

PROJECT NAME: MEDP - Forster Mill Hm1 - With

PROJECT NUMBER: 1512165

PROJECT
STATE: ME

MATRIX: A-WATER S-SOIL/SOLIDS SL-SLUDGE OIL-OIL CH-CHIPS
WI-WIPES C-CASSETTES W-WASTE O-OTHER

CONTAINER: P-PLASTIC
G-Glass V-VOA

G-CLASS VVOA

LAB ID	CLIENT SAMPLE IDENTIFICATION
--------	------------------------------

CONTAINER

SAMPLING INFORMATION



TYPE

#

DA

TIME

Tech

GRAB (G) OR COMPOSITE (C)

PRESERVATIVES

SAMPLE PH AT LOGIN

LEAD PAINT ANALYSIS

Notes:

PAGE 1 OF 2

TEMP UPON RECEIPT:

DUE DATE:
☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☒ 5 DAY ☐ 7 DAY ☐ 10 DAY

DATA PACKAGE:

P.O.#

COMPANY: Optimum Analytical and Consulting, LLC									
ADDRESS: 85 Stiles Road Suite 201, Salem NH 03079									
PHONE: 603-458-5247			FAX1:		FAX2:				
CLIENT: Jamie Noel, Kristina Scaviola			EMAIL: Jamie.Noel@optimumanalytical.com Kristina.Scaviola@optimumanalytical.com						
CONTACT:									
PROJECT NAME: MEDED - Forster Mill Hwy 1 - Wilton			PROJECT NUMBER: 1512165		PROJECT STATE: ME				
MATRIX: A-WATER S-SOIL/SOLIDS SL-SLUDGE OIL-OIL CH-CHIPS									
WI-WIPES C-CASSETTES M-WASTE O-OTHER									
G-GLASS V-VOA									
P-PLASTIC									
SAMPLING INFORMATION									
CONTAINER									
SIZE									
TYPE									
#									
DATE									
TIME									
TECH									
GRAB (G) OR COMPOSITE (C)									
PRESERVATIVES									
SAMPLE PH AT LOGIN									
LEAD PAINT ANALYSIS									
Notes:									

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24416 South Main Street, Suite 308

Carson, CA 90745

www.ameriscsi.com

310.834.4868 Phone~310.834.4772 Fax

COMPANY: Optimum Analytical and Consulting, LLC

Address: 85 Stiles Road Suite 201, Salem NH 03079

PHONE: 603-458-5247

FAX 1:

FAX 2:

CLIENT Jamie Noel, Kristina Scaviola
CONTACT:

EMAIL: jamie.noel@optimumanalytical.com
Kristina.Scaviola@optimumanalytical.com

PROJECT NAME: MEDP-forest hill (Am) - wilton

PROJECT NUMBER: 1512165

PROJECT STATE: ME

MARK:	A-WATER	S-SOIL/SOLIDS	SL-SLUDGE	OL-OIL	CH-CHIPS
MI-MIPES	C-CASSETTES	W-WASTE	O-OTHER		

CONTAINER: P-PLASTIC
G-Glass V-VOA

[illegible]

Notes:

PAGE 4 OF 4
TEMP UPON RECEIPT:

TEMP UPON RECEIPT:

P.O.#

UNSAMPLED BY: (PRINT)	DATE:	RECEIVED BY: (PRINT)	DATE:
(SIGN)	TIME:	(SIGN)	TIME:
RELINQUISHED BY: (PRINT)	DATE:	RECEIVED BY: (PRINT)	DATE:
(SIGN)	TIME:	(SIGN)	TIME:
RELINQUISHED BY: (PRINT)	DATE:	RECEIVED FOR LABORATORY BY:	DATE:
(SIGN)	TIME:	(SIGN)	TIME:

			TIME: 09145
--	--	--	-------------

ATTACHMENT C

Certifications

Hazardous Building Materials Survey
Forster Manufacturing
81 Depot Street
Wilton, Maine



This is to certify that
Lucas Hathaway

*has completed the requisite training, and has passed an examination for
reaccreditation as:*

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education, Inc.
16 Upton Drive Wilmington, MA 01887

June 9, 2014

Course Dates

14-8962-106-234345

Certificate Number

June 09, 2014

Examination Date

June 09, 2015

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

State of Maine
Asbestos Abatement Program

Lucas DB Hathaway



Inspector

Cert No. AI-0558

Trn.Exp.Date 06/09/2015

Expiration Date 06/30/2015

This is not a legal form of official identification





State of Maine
Department of Environmental Protection

LICENSE

Ransom Consulting, Inc.

Asbestos Consultant
(Inspection only)

License Number: **SI-0093**

Expiration Date: **10/31/2015**



State of Maine
Department of Environmental Protection

LICENSE

Optimum Analytical and Consulting, LLC

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0067

Expiration Date: 03/31/2016



State of Maine
Department of Environmental Protection

LICENSE

Optimum Analytical and Consulting, LLC

Asbestos Analytical Laboratory
(Air)

License Number: **LA-0065**

Expiration Date: **03/31/2016**

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101433-0

Optimum Analytical & Consulting LLC
Salem, NH

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2015-04-01 through 2016-03-31

Effective dates



A handwritten signature in black ink, appearing to read "W. R. M. L.", positioned above a horizontal line.

For the National Institute of Standards and Technology



6 Ashley Drive
1st Floor
Scarborough, ME 04074

207.879.1930 PHONE
207.879.9293 FAX

www.trcsolutions.com

December 8, 2015

Ms. Tracy Kelly
Maine Department of Environmental Protection
Division of Remediation
State House Station 17
Augusta, Maine 04333

Re: Asbestos Consulting Services
Forster Mill
581 Depot Street
Wilton, Maine

Dear Ms. Kelly,

TRC Environmental Corporation (TRC) conducted a limited inspection and sampling for the presence of asbestos containing materials (ACM) at the Forster Mill located at 581 Depot Street in Wilton, Maine (the Site). The inspection and sampling was limited to roofing material(s) that were reported to be of concern. Photographs of the roofing material(s) inspected and sampled for this project are included in Attachment A.

Per your request, only three samples of suspect ACM roofing material were collected (Roof-1, Roof-2 and Roof-3). A Site Layout Plan showing the three sampling locations can be found in Attachment B.

The inspection and sampling was conducted on December 1, 2015. Suspect ACM was sampled and submitted under the chain-of-custody (COC) protocol to TRC's accredited laboratory I Windsor, Connecticut for polarized light microscopy (PLM) bulk sample analysis. The laboratory analytical report and COC for the samples is included in Attachment C.

As discussed, the inspection, sampling, and analytical procedures were not performed in general accordance with the U.S. Environmental Protection Agency's (EPA's) National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 61 Subpart M, the EPA Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763, the Federal Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101, and the MEDEP Chapter 425 Asbestos Management Regulations.

CONCLUSIONS

During the review of the analytical results, materials containing greater than or equal to 1% asbestos by weight were classified as ACM, and those materials containing less than 1% asbestos by weight were classified as non-ACM.

Of the three samples analyzed, sample Roof-3 was reported as containing greater than 1% asbestos by weight and therefore is considered ACM. The remaining two samples (Roof-1 and Roof-2) were found to contain less than 1% asbestos by weight are classified as non-ACM.

Based on the positive result at Roof-3 (and negative results at Roof-1 and Roof-2), it is possible that the structure has more than one roof type, any one of which may or may not contain asbestos.

It is possible that the roofing material(s) similar to the Roof-3 sample contain asbestos. However, roofing material(s) similar to the Roof-1 and Roof-2 samples may or may not contain asbestos. The results of this limited effort do not provide enough information to determine if all or part of the 100,000 square foot roof can be considered ACM.


RECOMMENDATIONS

For definitive results, TRC recommends that a comprehensive asbestos survey of the roof be conducted. Following the identification of suspect homogeneous roofing material(s), it is recommended that representative samples be collected from each suspect homogeneous material and sent to an accredited laboratory for analysis in accordance with the AHERA requirements.

If there are any questions concerning information contained in this report, you may contact the undersigned in the Scarborough, Maine office or at (207) 879-1930.

Sincerely,

TRC Environmental Corporation



Charles D. Springer, CG, CHMM
Project Manager



Lindsay M. Paradis, LEED AP BD+C
Environmental Engineer

ATTACHEMENT A
PHOTOGRAPH LOG

Limited ACM Inspection and Sampling Report Photograph Log
Forster Mill
Wilton, Maine



Photograph No. 1:
View of location of sample Roof-1.



Photograph No. 2:
View of location of sample Roof-2.

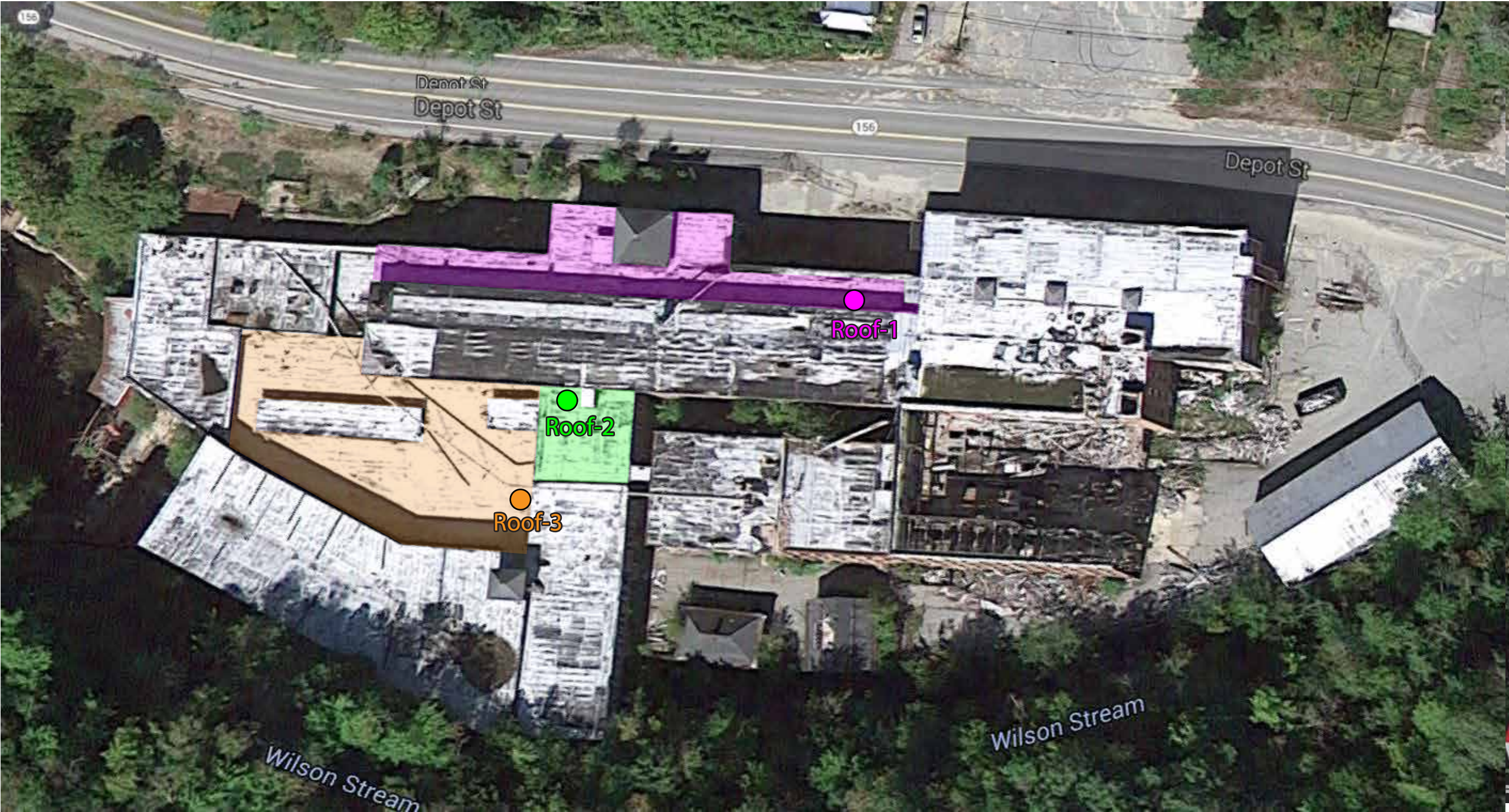
Limited ACM Inspection and Sampling Report Photograph Log
Forster Mill
Wilton, Maine



Photograph No. 3:
View of location of sample Roof-3.

ATTACHEMENT B

SITE LAYOUT PLAN



6 Ashley Drive
Scarborough, ME 04074
(207) 879-1930

Roof Asbestos Sampling
Location Plan

Forster Mill
581 Depot Rd.
Wilton, ME 04294

Maine Department of
Environmental Protection

FIGURE 1 DECEMBER
2015

0 35 70
1 inch = 70 feet

Legend

- Approximate Outline of
Roofing Associated with
Corresponding Sample
(Samples/Roofing are
Differentiated by Color)
- Approximate Sample
Location/Label

ATTACHEMENT C

ASBESTOS LABORATORY ANALYTICAL

REPORT AND COC



BULK ASBESTOS ANALYSIS REPORT

CLIENT: ME Department of Environmental Protection

Lab Log #: 0047305
Project #: 233392.0000.0000
Date Received: 12/03/2015
Date Analyzed: 12/04/2015

Site: Forster Mill Roof, Wilton, ME

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
Roof-1	Black/Brown	Yes	No	--	10% cellulose 10% synthetic fiber	ND	None
Roof-2	Black/Brown	Yes	No	--	10% cellulose 5% synthetic fiber	ND	None
Roof-3	Black/Brown	Yes	No	--	10% cellulose 10% synthetic fiber	10%	Chrysotile

Reporting limit- asbestos present at 1%

ND - asbestos was not detected

Trace - asbestos was observed at level of less than 1%

NA/PS - Not Analyzed / Positive Stop

SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

Analyzed by: K. Williamson
Kathleen Williamson, Laboratory Manager

Reviewed by: Aud. Parks
Amanda Parkins, Approved Signatory

Date Issued
12/04/2015

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0	AIHA-LAP, LLC #100122	CT #PH-0426	ME LA-0075, LB-0071	MA #AA000052	NY #10980	WV# LT000411
RI #AAL-007	TX #300354	VT #AL014538	LA#05011	VA #3333 000283	AZ #A20944	HI #L-09-004
CO# AL-15020	PHIL# 461	PA#68-03387			NJ #CT004	CA #2907



6 Ashley Drive
1st Floor
Scarborough, ME 04074

207.879.1930 PHONE
207.879.9293 FAX

www.trcsolutions.com

47305

Asbestos Bulk Sample Chain of Custody

Client: MEDEP - Forster Mill Roof, Wilton, ME	Date Sampled: 1 Dec 2015	Page: 1 of 1
TRC Project No: 233392	Sampled By: J. Laverriere & J. Prellwitz	
Project Manager: Lindsay Paradis	Turnaround Time: 3-day Results By: COB 7 Dec '15	
E-Mail: LParadis@trcsolutions.com	Special Instructions: N/A	

Additional Information: Roofing material - may contain layers			
Field Sample #	Material Description	Floor	Sample Location
Roof-1	Roofing Material	3rd Floor Roof	North side of Building, 3rd Floor Roof See Map
Roof-2	Roofing Material	3rd Floor Roof	Center of Building, 3rd Floor Roof See Map
Roof-3	Roofing Material	2nd Floor Roof	South side of Building, 2nd Floor Roof See Map

Relinquished By: [Signature] Date: 12/2/2015 Received By: [Signature] Date: 12/3/15 ¹⁰⁰⁰

Relinquished By: [Signature] Date: 12/3/15 Received By: _____ Date: _____

Relinquished By: _____ Date: _____ Received By: _____ Date: _____

**SUPPLEMENTAL PHASE II ENVIRONMENTAL SITE ASSESSMENT
FORSTER MANUFACTURING MILL
581 DEPOT STREET
WILTON, MAINE**

Prepared for:

Androscoggin Valley Council of Governments
125 Manley Road
Auburn, Maine
(Using U.S. EPA Brownfields Funding
Under AVCOG's Assessment Grant No. BF00A00043)

On Behalf of:

Town of Wilton
158 Weld Road
Wilton, Maine

Prepared by:

Ransom Consulting, Inc.
400 Commercial Street, Suite 404
Portland, Maine 04101
(207) 772-2891

Project R151.06123.013
March 22, 2017
Rev. 1

EXECUTIVE SUMMARY

On behalf of Androscoggin Valley Council of Government's (AVCOG's) Brownfields Assessment Program, the following report presents the findings of a Supplemental Phase II Environmental Site Assessment (ESA) for the Forster Manufacturing Mill (Forster) property located at 581 Depot Street in the Town of Wilton, Franklin County, Maine (the "Site"). The Supplemental Phase II ESA was performed by Ransom Consulting, Inc. (Ransom) in conjunction with the United States Environmental Protection Agency (U.S. EPA) and the Maine Department of Environmental Protection (MEDEP). The Phase II ESA was conducted using U.S. EPA Brownfield funding under AVCOG's Brownfields Assessment Grant No. BF00A00043.

The Site is a portion of a larger parcel of land, encompassing 17.65 acres, which is located on both the northern and southern sides of Wilson Stream, between Depot Street and Village View Street. The full parcel of land is identified by the Town of Wilton Assessor's Office as Lots 94 on Tax Map 5; however, for the purposes of this report, the "Site" is considered only the portions of the property located on the northern side of Wilson Stream (between Wilson Stream and Depot Street).

Development at the Site began in 1903, when it was purchased by the Wilton Woolen Company, and the main manufacturing mill building was constructed. This building is an approximately 232,000 square-foot, four-story manufacturing building, which was operated as a woolen mill until the late 1950's, at which time Forster purchased the property and began manufacturing croquet sets, turnings, and clothespins. In 1955, Diamond Brands purchased the mill building and began manufacturing toothpicks. In the early 2000's, the main manufacturing building was used as a printing press, box cutting, and packing facility. The Site has been vacant/unused since circa 2010.

In the southern portion of the Site, two wood-framed buildings are also present, which were used in connection with former Site operations. One of the buildings is a historical sawdust storage shed, and the other is referred to as the Photo Shed, and may have historically been used for the temporary storage of hazardous waste, prior to its removal from Site. A slab-on-grade metal storage building, constructed sometime between 1940 and 1962, is located in the eastern portion of the Site. This building was historically used for storage of materials, and circa 1998, as an automobile storage facility for a local towing company.

Numerous historic environmental investigations and remedial actions have been completed at the Site over the past 25 years, including underground oil storage tank assessments and removals, Phase I and Phase II ESAs, partial asbestos abatement activities, and partial building demolition activities, among others. Most recently, the Site was assessed through the MEDEP Brownfield Assessment Program, and a Phase I and Phase II ESA were conducted under that program in June and December of 2015, respectively. At the conclusion of these assessments, several data gaps were identified, including the condition of sub-slab soils, confirmation of whether the building roofing materials contained asbestos, and characterization of the potentially hazardous materials present in the numerous drums and containers onsite. These issues required further assessment, prior to start of proposed Site cleanup activities.

To address the identified data gaps, in December of 2016, Ransom performed this Supplemental Phase II ESA, which included: the advancement of five direct-push Geoprobe soil borings within the building footprint to assess sub-slab soils; field screening of soils for total volatile organic compounds (VOCs), using a photoionization detector (PID) and for petroleum impacts, using the oleophilic dye test; collection of soil samples for laboratory analysis of VOCs, extractable petroleum hydrocarbons (EPH) fractions, including target polycyclic aromatic hydrocarbons (PAHs), volatile petroleum hydrocarbons (VPH)

fractions, excluding the target petroleum VOCs, total Resource Conservation and Recovery Act (RCRA) 8 Metals, and polychlorinated biphenyls (PCBs); collecting samples of roofing materials to determine if asbestos-containing building materials were present; the consolidation of potential hazardous waste containers throughout the Site; and collection of representative product waste characterization samples for laboratory analysis of pH, Flashpoint, Metals, and PCBs.

The Site is proposed for mixed use commercial and light industrial redevelopment; as such, the analytical results of soil samples were compared to the MEDEP Bureau of Remediation and Waste Management's (BRWM's) "Remedial Action Guidelines (RAGs) for Sites Contaminated with Hazardous Substances," dated February 5, 2016 for the "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios. None of the sub-slab soil samples collected as part of this Supplemental Phase II ESA contained contaminant concentrations which exceeded these regulatory cleanup guidelines; therefore, no further assessment or remedial actions are recommended at the Site in connection with sub-slab soils.

Also as part of this Supplemental Phase II ESA, Ransom conducted a roofing assessment, and collected samples of several asphalt-based roofing materials and associated sealants, which were considered suspect asbestos-containing materials (ACM). Asbestos was detected in samples of roofing materials collected from the Site buildings. Specifically, one large roof area near the westerly end of the Main building, sealants identified in roof perimeter flashings, the "silver coat sealant" applied to the majority of the Main building roof, and the asphalt shingles on the Paint Shed building were each identified as ACM.

As part of the consolidation and characterization of potential hazardous waste remaining on-Site, waste containers were collected from safely-accessible areas of the Site, transported to the metal storage building, placed on poly sheeting, inventoried, and waste characterization samples were collected. None of the waste characterization samples collected contained contaminants which exceeded the standards outlined in the Chapter 860 Waste Oil Management Rules for Specification Waste Oil or the MEDEP Chapter 850 Identification of Hazardous Wastes; therefore, these waste materials are anticipated to be profiled and characterized as non-hazardous.

Based on the information obtained during this Supplemental Phase II ESA, Ransom recommends the following with respect to Site redevelopment:

1. The results of this Supplemental Phase II ESA, as well as the Phase I and Phase II ESAs completed in 2015 through the MEDEP Brownfield Assessment Program, should be submitted to the MEDEP Voluntary Response Action Program (VRAP). The MEDEP VRAP is a voluntary program that offers technical review of environmentally-impacted sites and ultimately provides state liability protections for interested parties, including a "No Action Assurance" (NAA) letter, "No Further Action Assurance" (NFAA) letter, and/or a "Certificate of Completion" letter (i.e., no further action required), provided that proper and appropriate environmental assessment and cleanup/remedial actions are completed, as approved by the MEDEP.

MEDEP VRAP will likely require a deed restriction and/or institutional control(s) in the form of a Declaration of Environmental Covenant (DEC) to prohibit extraction of groundwater at the Site for drinking water use and potentially restrict/prohibit off-Site disposal of impacted soils and/or groundwater at the Site, without proper MEDEP notification/approvals and implementation of a Soil and Groundwater Management Plan (S&GWMP) and a Health and Safety Plan;

2. A S&GWMP should be prepared prior to Site redevelopment to insure proper characterization, handling, and management of impacted soils and groundwater during future Site redevelopment and/or subsurface earthwork-related activities at the Site. The S&GWMP may include, in part, the proposed reuse of impacted soils on-Site, where practical and per geotechnical requirements, and procedures for proper off-Site soil disposal for excess soils that cannot be reused on-Site;
3. Asbestos-containing materials (ACM) were identified associated with Site building roofs. Materials identified as ACM that may be impacted by future renovation or demolition of the Site building should be properly removed for off-Site disposal, prior to or during such activities;
4. Waste containers which have been consolidated in the metal storage building should be properly managed for off-Site transportation and disposal; and
5. As a likely condition of the MEDEP VRAP and assuming U.S. EPA Brownfields Cleanup funding will be utilized for cleanup of the Site, a formal Site-specific Analysis of Brownfields Cleanup Alternatives (ABCA) and/or Conceptual Remedial Action Plan (RAP) should be prepared for review and approval by the MEDEP and U.S. EPA, prior to future Site cleanup, remedial actions, and redevelopment activities.

In addition to these recommendations, it should be noted that, as part of the 2015 Ransom Phase I ESA and the 2015 TRC Phase II ESA, several additional recommendations were made that should also be implemented prior to or during future Site redevelopment activities. These recommendations include: the four-story unsupported exterior masonry/brick wall should be stabilized or removed, as soon as possible to mitigate the safety hazard to site workers and trespassers; floor drains be addressed and mitigated during building demolition tasks; and a deed restriction be placed on the Site likely limiting future redevelopment to commercial and/or industrial activity, without further assessment and/or mitigation measures to further reduce risks to meet other potential reuse scenarios. Additionally, the TRC Phase II ESA identified the presence of contaminants in surficial soil samples on-Site at concentrations which exceed their applicable MEDEP cleanup guidelines. These impacted soils will likely require management, as part future Site redevelopment activities; depending on Site reuse scenarios, additional cleanup actions may be required to mitigate exposure risks from the impacted surficial soils to future Site occupants and workers.

This summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in decisions made or actions taken based on this information.

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Figure 2	Site Plan and Sample Locations
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APPENDICES

Appendix A	Soil Boring Logs
Appendix B	Photograph Log
Appendix C	Certified Laboratory Analytical Reports
Appendix D	Waste Inventory

1.0 INTRODUCTION

On behalf of the Androscoggin Valley Council of Governments (AVCOG) and the Town of Wilton, the following report presents the findings of a Supplemental Phase II Environmental Site Assessment (ESA) performed by Ransom Consulting, Inc. (Ransom) for the Forster Manufacturing Mill (Forster) property located at 581 Depot Street in the Town of Wilton, Franklin County, Maine (the “Site”).

1.1 Purpose

Numerous historic environmental investigations and remedial actions have been completed at the Site over the past 25 years, including underground oil storage tank assessments and removals, Phase I and Phase II ESAs, partial asbestos abatement activities, and partial building demolition activities, among others. Most recently, the Site was assessed through the Maine Department of Environmental Protection (MEDEP) Brownfield Assessment Program, and a Phase I and Phase II ESA were conducted under that program in June and December of 2015, respectively. At the conclusion of these assessments, several data gaps were identified, including the condition of sub-slab soils, confirmation of whether the building roofing materials contained asbestos, and characterization of the potentially hazardous materials present in the numerous drums and containers onsite. These issues required further assessment prior to start of proposed Site cleanup activities.

The objective of the Supplemental Phase II ESA was to assist in evaluating data gaps and further documenting current environmental conditions and to what extent, if any, potential releases of on-Site oil and/or hazardous materials (OHM) have adversely impacted environmental conditions at the Site; to evaluate if the Site is suitable for reuse and/or redevelopment; and to determine if environmental risk mitigation or cleanup measures are necessary to facilitate and support such reuse/redevelopment.

1.2 Special Terms and Conditions

This Supplemental Phase II ESA was conducted in accordance with our executed Master Services Agreement with AVCOG, dated January 4, 2016 and Task Order 013, dated October 25, 2016. Authorization to perform this Supplemental Phase II ESA was provided by AVCOG and access to the Site was provided by Town of Wilton (Site Owner). Furthermore, the Phase II ESA was completed in accordance with Ransom’s Site-Specific Quality Assurance Project Plan (SSQAPP, Addendum No. 58, Revision No. 1), dated November 22, 2016.

This Phase II ESA report was prepared using U.S. EPA Brownfields funding under the AVCOG Brownfields Assessment Grant No. BF00A00043, and therefore, is a public document. However, the services, findings, and conclusions noted herein, and associated documents provided to the client by Ransom are solely for the benefit of the AVCOG, the Town of Wilton, and their affiliates and subsidiaries and their successors, assigns, and grantees. Other than for public informational purposes, reliance or any use of this report by anyone other than AVCOG and the Town of Wilton, for whom it was prepared, is prohibited. Furthermore, reliance or use by any such third party without explicit authorization in the report does not make said third party a third-party beneficiary to Ransom’s contract with AVCOG. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

1.3 Limitations and Exceptions of Assessment

The Supplemental Phase II Investigation was executed in accordance with the scope of work proposed in the SSQAPP. Any additional revisions to the scope of work or methodologies outlined in the SSQAPP implemented, based on conditions encountered in the field, are discussed in Section 3.0. Furthermore, the findings provided by Ransom in this report are based solely on the information reported in this document and the results of limited explorations and confirmatory laboratory testing. Our findings and conclusions must be considered as our professional opinion concerning the significance of the limited data gathered during the course of the environmental assessments. Ransom does not and cannot represent that the Site contains no OHM or other adverse environmental conditions beyond that observed by Ransom during the environmental assessments and field investigations. Should additional information become available in the future, this information can be reviewed by Ransom and the findings, presented herein, may be modified as a result of the review.

2.0 BACKGROUND

2.1 Site Description, History, and Physical Setting

The Site is located at 581 Depot Street in the Town of Wilton, Maine, on the southern side of Depot Street, and is abutted to the east, south and west by Wilson Stream. The Site is a portion of a larger parcel of land, encompassing 17.65 acres, which is located on both the northern and southern sides of Wilson Stream, between Depot Street and Village View Street. The full parcel of land is identified by the Town of Wilton Assessor's Office as Lots 94 on Tax Map 5; however, for the purposes of this report, the "Site" is considered only the portions of the property located on the northern side of Wilson Stream (between Wilson Stream and Depot Street). Please refer to the appended Figure 1, Site Location Map, to view the general location of the Site on a 7.5-minute topographic quadrangle.

Development at the Site began in 1903, when it was purchased by the Wilton Woolen Company, and the main manufacturing mill building was constructed. This building is an approximately 232,000 square-foot, four-story manufacturing building, which was operated as a woolen mill until the late 1950's, at which time Forster purchased the property and began manufacturing croquet sets, turnings, and clothespins. In 1955, Diamond Brands purchased the mill building and began manufacturing toothpicks. In the early 2000's, the main manufacturing building was used as a printing press, box cutting, and packing facility. The southwest portion of this building is constructed over Wilson Stream, and several stormwater/process pipes/floor drains were observed in this area, which historically discharged directly to Wilson Stream. Portions of Wilson Stream were also historically diverted beneath the main manufacturing mill building through a series of penstocks and tail races. In addition to these waterways, portions of the basement of the facility are also underlain by crawl spaces.

This wood-frame manufacturing building is in poor condition, and in 2014, was declared a "dangerous building" pursuant to 17 M.R.S. § 2851. In 2011, the Site owners began conducting demolition activities in the southeastern portion of this building; however, due to the identified presence of asbestos-containing materials (ACM) and a lack of funds, the demolition was not completed. Beams and structural supports were removed, and this section of the structure (including an approximately 40-foot tall, free-standing southern exterior wall) appears to be structurally unstable. The main manufacturing building is currently unheated, and is not provided with running water or electricity. Historically, the Site was provided by public water and sewer.

In the southern portion of the Site, two wood-framed buildings are present, which were used in connection with former Site operations. One of the buildings is a historical sawdust storage shed. Based on historical research of Site operations, this building was used to store sawdust prior to its use in the on-Site boiler. The second building is referred to as the Photo Shed. Based on our review of historical MEDEP correspondence, this building may have historically been used for the temporary storage of hazardous waste, prior to its removal from Site. Both of these outbuildings are constructed on concrete blocks above the ground, and the southern exterior walls of these buildings abut Wilson Stream.

A slab-on-grade metal storage building, constructed sometime between 1940 and 1962, is located in the eastern portion of the Site. This building was historically used for storage of materials, and circa 1998, as an automobile storage facility for a local towing company. The southern exterior wall of this building abuts Wilson Stream. Electricity was formerly provided to the building; however, no water or sewer services were provided to this building.

Several outbuildings/sheds, associated with historical water service to the facility, are present in the northern portion of the Site. These small wood-frame buildings were constructed over valves, hydrants and other water facilities.

Remaining portions of the Site are generally impervious, with paved parking areas to the east and south, paved loading docks and parking areas to the north, and small areas of grassy/overgrowth in the western and northwestern portion of the Site. The southern Site boundary is an approximately three-foot high concrete wall, which comprises the northern bank of Wilson Stream. Several stormwater discharges were observed through this concrete wall. Construction and demolition debris are piled throughout the eastern and southern portion of the Site. Stormwater catch basins were observed throughout the Site. In the northwestern portion of the Site, the former locations of two stacks could be observed, as well as an abandoned-in-place concrete oil vault with protruding process pipes.

The Site has been vacant/unused since circa 2010.

Please refer to the appended Figure 2, Site Plan, for the location of key site features as well as areas of potential environmental concern at the Site.

2.2 Previous Investigations

“Site Assessment for the Forster Manufacturing Facility No. 6 Oil Concrete Vault Located in Wilton, Maine,” Morrison Geotechnical Engineering (Morrison), October 1992.

Morrison completed a site assessment for the abandonment-in-place of the concrete 100,000-gallon No. 6 fuel oil vault located in the northern portion of the Site. According to the Morrison Report, at the time the underground storage tank (UST) was abandoned, evidence of cracking in the vault walls and floor was observed; however, all cracks were reportedly sealed. Two soil samples were collected from beneath the base of the vault. These two soil samples were field-screened, and the volatile headspace readings were reportedly both non-detect. No confirmatory laboratory samples were collected. According to Morrison, there were “no visual signs of uncontrolled oil around the vault area.” Based on these observations, Morrison concluded that there was no evidence to indicate that this oil storage vault had adversely impacted environmental conditions at the Site. No information on the actual tank abandonment was provided in this report.

“Phase I Environmental Site Assessment, Diamond Brands, Inc. Wilton, Maine,” Shield Environmental Associates, Inc., September 2002.

Shield completed a Phase I ESA for the Site, and identified the following Recognized Environmental Conditions (RECs): 1) the presence of suspect ACM on the fourth floor of the Site building; 2) the historical use of the Site as a woolen mill and historical on-site coal and oil storage; 3) closed floor drains in an on-site service garage which historically discharged directly to Wilson Stream; 4) a 100,000-gallon concrete fuel oil storage vault which was abandoned-in-place in 1992, and the historical presence of a 12,000-gallon fuel oil tank inside of that vault; 5) the presence and former use of a hazardous waste room in the Site building; and 6) potential impacts from off-site properties, including two leaking underground storage tank (LUST) facilities and 21 UST facilities.

During their Site reconnaissance, Shield observed the presence of four 275-gallon and one 250-gallon No. 6 fuel oil aboveground storage tanks (ASTs) at the Site. Additionally, drums of oils, detergents, alcohol,

waste ink, and other hazardous materials/universal waste were observed by Shield at the Site. It should be noted that the Site was operational at the time of Shield's report.

As part of their assessment, Shield reviewed the following historical environmental reports: a 1992 GZA Phase I ESA; a 1992 GZA Phase II Investigation; a 1995 GZA Environmental Site Evaluation Update; and a 1998 EMCON Phase I ESA. *[It should be noted that Ransom was not able to locate copies of these reports during the MEDEP file review, and copies of these reports were not included in the Shield ESA appendices. The following paragraphs present Ransom's overview of the report summaries, as presented in the Shield ESA.]*

- 1992 GZA Phase I ESA: As part of the 1992 ESA, GZA reportedly documented the following air emission sources at the Site: a wood-fired boiler; wood milling and conveying equipment used in croquet mallet production; and drying ovens used to dry volatile organic compounds (VOC)-based lacquers and paints on croquet mallets. GZA also reportedly documented the fact that the plant discharged cooling water, condensate, and stormwater directly to Wilson Stream. At the time of GZA's site reconnaissance, paints, lacquers, water-based coatings, solvents, printing chemicals, boiler conditioning acids, ignitable solvents/inks, corrosive chemicals, and lubricating and hydraulic oils were reportedly observed throughout the Site building. At the time of the 1992 GZA ESA, the plant was a Class 2, Resource Conservation and Recovery Act (RCRA) Large Quantity Generator (LQG) of Hazardous Waste; and a hazardous waste storage area was reportedly observed on the second floor. GZA further identified potential on-site contamination from the historical 100,000-gallon concrete oil vault, incidental and historical spills/releases, historical industrial site use, historical industrial use on up-gradient properties, and historical discharge of boiler blow-down water to soils. GZA also reportedly identified compliance issues including opacity limit violations from the boiler, discharge of wastewater to Wilson Stream, National Pollution Discharge Elimination System (NPDES) stormwater violations due to roof drains, hazardous waste labeling violations, hazardous waste storage and disposal violations, improper storage and disposal of wood ash, and improper disposal of hazardous waste to the Wilton landfill.
- 1992 GZA Phase II Investigation: As part of this investigation, GZA reportedly collected soil samples, groundwater samples, surface water samples, and sediment samples at the Site. Shield reports that the soil samples were field screened, and that GZA identified no evidence of VOC contamination. Two groundwater and three surface water samples were reportedly collected; these samples reportedly did not contain VOCs, volatile petroleum hydrocarbons (VPH), semi-volatile organic compounds (SVOCs), metals, or cyanide at concentrations which exceeded applicable regulatory guidelines; however, it was reported that iron and manganese were detected at concentrations which exceeded secondary drinking water standards. Three sediment samples were reportedly collected from Wilson Stream and submitted for laboratory analysis of VOCs, SVOCs, metals and cyanide. These sediment samples reportedly contained concentrations of polycyclic aromatic hydrocarbons (PAHs) and dibenzofurans "which ranged from 4.4 to 69.4 mg/kg". According to Shield, GZA reportedly concluded that oil and hazardous substances had not impacted groundwater or surface water at the Site; and that the elevated contaminant concentrations in on-site sediments were consistent with typical background concentrations in historically industrial areas. GZA further concluded that the Site did not pose a threat to public or private water supplies.

- 1995 GZA Site Evaluation Update: During this update, GZA reportedly observed generally the same chemicals at the Site as they had observed in 1992, and reportedly identified the same RECs as were outlined in the 1992 GZA ESA. GZA reportedly collected groundwater samples from previously-installed monitoring wells, and found that they were not impacted by VOCs or VPH.
- 1998 EMCON Phase I ESA: According to Shield, the 1998 EMCON ESA identified RECs at the Site which included: potential contamination associated with the 100,000-gallon oil storage vault; historical on-site activities including oil and coal storage, and the historical use of dyes; housekeeping concerns associated with hazardous materials on-site; floor drains in the service garage which discharge directly to Wilson Stream; historical emissions from on-site sources; suspect ACM; and the lack of a stormwater pollution prevention plan.

“ASTM Phase I Environmental Site Assessment, Forster Manufacturing, 81 Depot Street, Wilton, Maine, Revision 1,” prepared by Ransom, dated June 29, 2015.

Ransom completed a Phase I ESA on behalf of the MEDEP in June of 2015. On May 15, 2015, Ransom conducted a reconnaissance of the Site. Several items of environmental concern were observed:

- Drums, containers and hazardous materials were observed throughout the Site buildings, including the metal storage building, the Photo Shed, and throughout the main manufacturing building. Some of these containers contained unknown liquids, and many of these containers were unlabeled, rusted, leaking and/or in poor condition. Staining was observed on the floors in the vicinity of these containers.
- Floor drains, sumps, and open penstocks were observed throughout the basement of the main manufacturing building. These drains currently/historically have discharged directly to Wilson Stream. Widespread staining, drums and containers (some of which showed evidence of leaking), and evidence of dumping were observed in the general vicinity of the floor drains/sumps. Ransom walked along the banks of Wilson Stream, beneath the manufacturing building, and observed dozens of pipes and drains which currently/historically discharged from the building into Wilson Stream. Black staining was observed on the banks of Wilson Stream, beneath identified outfall pipes, which suggest that hazardous materials may have been discharged historically onto the banks of the stream, or into the stream itself.
- Fill and vent pipes were observed on the northern exterior wall of the main manufacturing building. These pipes were cut inside of the basement. No staining or discernible odors were observed in connection with these former fill and vent pipes.
- Significant amounts of black oily staining were observed on walls, floor and ceilings throughout the main manufacturing building. This staining is presumed to be from former Site operations.
- Three open-top dumpsters/roll-off containers on-site were observed at the Site. Two were filled with construction and demolition debris and general solid waste, and one had asbestos placarding and contained apparent ACM waste. The asbestos dumpster has reportedly been removed as of the date of this report. Staining on the ground beneath

these dumpsters suggests that stormwater which is trapped in these containers eventually discharges overland towards Wilson Stream.

- Stormwater on the Site is expected to flow overland towards Wilson Stream, or into one of several on-site catch basins. Catch basins at the Site are piped directly to Wilson Stream, or into one of the penstocks/tail races which run beneath the main manufacturing building. No provisions for pre-treatment of stormwater runoff were observed or historically noted at the Site. Roof drains also discharged directly to Wilson Stream. There is no record that the facility ever maintained a Stormwater Pollution Prevention Plan (SWPPP).
- Concrete pads which supported two historical stacks were observed in the northern portion of the Site. Ransom observed that beneath each of these pads, there was a space in which ash and material was collected and could be removed.

As part of this Phase I ESA, Ransom identified RECs which included the following:

1. The main manufacturing building has been used for industrial purposes since 1902, including a woolen mill; a manufacturer of croquet sets, clothespins, and toothpicks; and a printing/packaging facility. The historical industrial use of the Site building has the potential to have impacted soil, groundwater, sediments, pore water, and soil vapor at the site.
2. The main manufacturing building has been historically heated by coal, wood and oil-fired boilers. The Site formerly maintained a 1,000-gallon gasoline UST, which was removed in 1986, and a concrete 100,000-gallon No. 6 fuel oil UST, which was abandoned-in-place in 1992. The exact location of the 1,000-gallon UST is unknown. As part of the abandonment-in-place of the 100,000-gallon UST, no soil samples were collected for laboratory analysis. Additionally, a 12,000-gallon No. 4 fuel oil AST was historically located inside the 100,000-gallon concrete vault; and in 2002, Shield observed the presence of four 275-gallon and one 250-gallon No. 6 fuel oil ASTs at the Site. The exact location of these ASTs is unknown.
3. The Site is currently identified as a RCRA Small Quantity Generator (SQG), and prior to 1997, the Site was classified as a RCRA LQG. The facility formerly used and generated hazardous wastes including: spent cleaning solvents and hazardous flammable substances (methyl ethyl ketone, alcohol, acetone, toluene, and butyl acetate); VOC-based paint, lacquer, and spray booth-related hazardous wastes; dyes and inks; polychlorinated biphenyls (PCB)-contaminated material (transformers, capacitors, switches and ballasts); and two Safety-Keen parts cleaners with 35-gallon and 5-gallon reservoirs containing spent solvents. Hazardous wastes were stored on-site in the finishing department on the second floor of the main manufacturing building, the paint/spray booth area and a former maintenance shop on the first floor of the main manufacturing building, the hazardous waste storage area and the machine shop area located in the basement of the main manufacturing building, in the “motor and electrical equipment storage area at ground floor level at the rear of the mill complex,” and a “wood-framed building adjacent to the warehouse shipping area” (presumed Photo Shed).

4. The Site formerly maintained air emission licenses, and MEDEP correspondence indicates that the facility formerly burned solvent wastes (lacquer thinner, acetone, methyl ethyl ketone, butyl acetate, ethyl acetate and toluene), waste engine oil, and garbage in the wood-fired boiler. The MEDEP also documented historical violations associated with smokestack opacity limits, smokestack height, and downwash conditions. Potentially contaminated ash remains on-site beneath the concrete pads in the northern portion of the Site which formerly supported two historical stacks.
5. Floor drains, sumps, and open penstocks were observed throughout the basement of the main manufacturing building. Widespread staining, drums and containers, and evidence of dumping were observed in the general vicinity of these drains. It is likely that all of these drains discharged directly to Wilson Stream. Additionally, based on conversations with the Wilton wastewater department, it is known that the facility formerly discharged process water, condensate and cooling water, and pre-1978 sewer discharges directly to Wilson Stream. Ransom observed dozens of pipes and drains which currently/historically discharged from the building into Wilson Stream. Black staining was observed on the banks of Wilson Stream, beneath this portion of the building, which suggest that hazardous materials may have been discharged historically onto the banks of the stream, or into the stream itself. Historical environmental assessments, conducted by GZA in 1992, identified elevated concentrations of PAHs and dibenzofurans in on-site stream sediments.
6. According to Code Enforcement Office files, during the partial demolition of the main manufacturing building in 2011, the MEDEP permitted that construction and demolition debris from the building could be disposed on-site within a “cellar hole.” The demolition was later stopped due to friable asbestos being co-mingled with demolition debris. Abatement Professionals subsequently completed a partial asbestos abatement of exterior portions of the Site; however, it is likely that asbestos containing materials remain on-site in the main manufacturing building, and in on-site soils. The ACM present in the main manufacturing building has been addressed in the Hazardous Building Materials Survey, which was conducted by Ransom concurrently with this ESA. However, there is the potential that ACM was disposed in the “cellar hole” on-site. The exact location of this “cellar hole” is unknown.
7. During Ransom’s Site reconnaissance, 55-gallon drums, 5-gallon buckets, miscellaneous containers, and hazardous materials were observed throughout the Site buildings, in locations including: the metal storage building; the Photo Shed; the main manufacturing building basement; and the boiler room. Many of these containers contained unknown liquids, were unlabeled, or were in poor condition (rusty, leaking, etc.). Widespread staining was observed on the floors throughout the main manufacturing building, potentially in connection with these containers.
8. Extensive black oily staining, assumed to be related to historical Site operations processes, was observed throughout the main manufacturing building, on the floors, ceilings and walls. Based on the age of the building, there is the potential that hydraulic oil used as part of historical Site operations contained PCBs.
9. Three open-top dumpsters/roll-off containers on-site were observed at the Site. Two were filled with construction and demolition debris and general solid waste, and one had

asbestos placarding and contained apparent ACM waste. The asbestos dumpster has reportedly been removed as of the date of this report. Staining on the ground beneath these dumpsters suggests that stormwater which is trapped in these containers eventually discharges overland towards Wilson Stream.

10. Stormwater at the Site is expected to flow overland towards Wilson Stream, or into one of several on-site catch basins which discharge directly to Wilson Stream, or directly into one of the penstocks/tail races which run beneath the main manufacturing building. Roof drains also discharged directly to Wilson Stream. No provisions for pre-treatment of stormwater runoff were observed or historically noted at the Site.
11. Based on historical environmental reports, the age of the building and Ransom's observations during our Site reconnaissance, hazardous building materials are present on-site, and include ACM, lead-based paint, potential PCB-contaminated wastes and building materials, and universal wastes (fluorescent bulbs and ballasts, mercury thermometers, etc.). It should be noted that a Hazardous Building Materials Survey was conducted concurrently with this Phase I ESA to identify the potential presence of these materials.

Based on the information obtained during this assessment, Ransom concluded that additional investigation was warranted to further evaluate the RECs identified above. Specifically, Ransom recommended the following:

1. Conduct a subsurface investigation at the Site which would include the collection of soil, groundwater, sediment, pore water, and soil vapor samples to assist in evaluating and documenting current environmental conditions and to what extent, if any, the RECs identified above have adversely impacted environmental conditions at the Site. As part of this investigation, the ash present in the area beneath the former stacks should be sampled and characterized for disposal; the dumping area observed on the southern bank of Wilson Stream should be assessed; and potential preferred pathways associated with underground utilities (including the piping for the former water reservoir on the northern side of Depot Street, and water infrastructure along Depot Street) should be investigated.
2. Conduct a sampling program inside the main manufacturing building to evaluate whether PCB-containing building materials are present, and to determine if PCBs were present in the oil which was observed to have historically stained interior floors, ceiling, and walls.
3. The hazardous materials, drums, and containers on-site should be thoroughly inventoried and characterized. These materials should be consolidated and properly stored on-site (in a secured area with secondary containment) until which time they can be transported offsite for proper disposal. These materials must be removed from Site prior to demolition of the building.
4. All hazardous building materials which were identified in the Hazardous Building Materials Survey (i.e. ACM, lead-based paint, and universal wastes) must be abated and/or removed from Site prior to building demolition. Any Hazardous Building Materials identified in the Phase II subsurface investigation (i.e. PCB-containing building materials) must also be properly abated and/or removed from Site prior to building demolition.

5. A floor drain investigation should be conducted in the main manufacturing building to determine the ultimate disposal locations of any identified floor drains, and to determine if any subsurface sumps or dry wells are present beneath the building. A thorough inventory of drains (open and closed) will be conducted, and any open drains will be dye and/or smoke tested to determine ultimate disposal locations. Because the main manufacturing building is planned for demolition, no closure of active floor drains will be necessary; however, if the building is to remain or be redeveloped, all active floor drains in the main manufacturing building should be permanently closed.
6. Prepare a Soil and Groundwater Management Plan which will be implemented during future Site excavation and/or demolition activities. This Management Plan will provide guidance on the management of impacted soils and groundwater which may be encountered during Site redevelopment activities to minimize human exposure risks. This plan will outline soil and groundwater management procedures, testing requirements, stockpile maintenance, and notification/disposal requirements, among other pertinent data.

“Hazardous Building Materials Survey, Forster Manufacturing, 81 Depot Street, Wilton, Maine,” prepared by Ransom, dated June 29, 2015.

Ransom also conducted a Hazardous Building Materials Survey (HBMS) on behalf of the MEDEP, concurrent with the June 2015 Phase I ESA. Based on the results of our inspection, Ransom’s HBMS report included the following conclusions:

1. ACM were identified at the Site. Materials identified as ACM that may be impacted by future renovation or demolition of the Site building should be properly removed prior to such activities. ACM identified at the Site included asbestos-cement piping, paneling, and flooring, areas of linoleum sheet flooring, interior and exterior window glazes, and pipe insulation, boiler lagging, gaskets, etc. associated with two large-unit boilers.
2. Due to access and safety limitations, asphalt-based roofing materials were identified as presumed asbestos-containing materials (PACM).
3. Lead-based paint (LBP) was identified at the Site building. General and/or demolition contractors may perform demolition of surfaces coated with LBP or lead-containing coatings, provided that the handling of components coated with paint containing lead at any concentration (referred to as lead-containing paint) complies with Occupational Safety and Health Administration’s (OSHA’s) lead standards.
4. Ransom inventoried additional hazardous or potentially hazardous building fixtures at the Site during the course of this investigation that may contain polychlorinated biphenyls (PCBs) and heavy metals. Disposal of each of these items is also subject to hazardous and/or universal waste disposal requirements.

“Phase II Environmental Site Assessment Summary Report, Forster Mill, 581 Depot Street, Wilton, Maine,” prepared by TRC Environmental Corporation (TRC), dated December 2015.

TRC performed a Phase II ESA to evaluate the RECs identified in Ransom’s Phase I ESA. Based on the results of this Phase II ESA, the following conclusions were made:

- Site Safety – The four story unsupported exterior masonry/brick wall on-site is creating an unsafe or hazardous condition for workers and trespassers. This unsafe condition should be addressed quickly, likely through the removal of this unsupported wall.
- TRC observed relatively small quantities of presumed hazardous wastes and/or petroleum products throughout the structures but concentrated on the basement/first floors. Staining or other evidence of release was observed in some areas.
- Ash-like material was observed in the area around the smokestack.
- Floor drains, sumps, and open penstocks were observed in the basement of the building with standing water, sediment and debris located within the structures. At some locations, evidence of staining and odors were observed.
- Pipes and drains were observed on the bank of Wilson Stream. Under the Mill building, black staining was observed on rocks.
- Staining was observed on the floors throughout the site building on the floors, ceilings and walls.
- A geophysical survey was conducted to locate existing on-site utilities, screen boring locations, and trace pipes/drains. Drains were detected in the subsurface that were oriented from north to south. While the terminus of each drain was not located, it is assumed that most ultimately end in the subsurface underneath the building or at Wilson Stream. The Site is not (and to our knowledge has not been) connected to a process water system. The Site was connected to the Town sanitary sewer system in 1978.
- Soil samples were screened in the field during soil boring activities. Photoionization detector (PID) screening results from the soil collected during drilling activities ranged from non-detect to 31.1 parts per million (ppm), indicating VOC presence in a small portion of the Site soils located in close proximity to the former UST.
- Relatively low concentrations of SVOC compounds and metals in soil are generally distributed across the entire Site and found at similar concentrations to the background soil samples. Low concentration petroleum compounds, extractable petroleum hydrocarbons (EPH) carbon chain C11-C22 Aromatics, and certain PAHs and dibenzofuran were detected above MEDEP Remedial Action Guidelines (RAGs), and appear to be localized in the area around the 100,000-gal concrete UST bunker (northwest portion of the Site).
- Groundwater Analytical Results – One VOC, one SVOC, and one metal were detected in the groundwater samples at concentrations below the Residential and/or Construction Worker RAGs. No other constituents were detected. Based on the collected samples and applicable RAGs, groundwater does not appear to be impacted at the Site.
- Air-phase hydrocarbons (APH) and EPA Method TO-15 constituents were detected in soil gas samples below the Commercial Worker RAGs. There does not appear to be a correlation between the low level detections and the specific location in the mill building. Based on the collected samples, soil gas does not appear to be impacted at the Site.

- Streambed Sediment Analytical Results – Five SVOC compounds were detected above Park User and/or Construction Worker Scenario RAGs. Generally speaking, the four sediment samples (one upstream, one downstream, and two adjacent) have similar relative concentration of EPH, SVOC, and metal constituents. It is likely that historical Site operations had some effect on sediment quality but the extent is not known and/or if impacts are from an upstream source. Several drains from the mill buildings appear to discharge into Wilson Stream however specific historical processes were not directly linked to SVOC compounds in sediment.
- Drain Sediment Analytical Results – Two EPH and two metals were detected above the Commercial Worker and/or Construction Worker Scenario RAGs. Petroleum compounds and metals identified in material removed from drains indicate hazardous materials and petroleum products were used in the mill building and that impacted material does exist in Site drains. Drains are assumed to discharge to the subsurface underneath the building or to Wilson Stream.
- Hazardous Waste Inventory – TRC conducted a hazardous waste inventory of safely accessible rooms/areas on each floor of the mill building, as well as the exterior metal shed, former sawdust shed, and photo shed. A total of fifteen types of potentially hazardous materials were identified including the following: paints, adhesives, silica gel desiccant, possible gasoline, propane, oxygen, and acetylene tanks, photo-development liquids, light ballasts, hydraulic oil, and unidentified liquids.

Based on the results of this Phase II ESA, the following recommendations were made:

1. Stabilize or remove the four story unsupported exterior masonry/brick wall as soon as possible to mitigate the safety hazard to site workers and trespassers.
2. Secure both interior and exterior areas of the Site from potential trespassers which may vandalize and release petroleum and/or hazardous materials from the numerous containers within the buildings;
3. Apply to the MEDEP's Voluntary Response Action Program (VRAP) to gain the liability protections afforded under the program and work with the Department to undertake possible additional assessment and/or remedial actions to mitigate human health exposure and ecological risk;
4. Safely package for transport and dispose of all petroleum and/or hazardous materials containers offsite;
5. Demolish the Site buildings and remove debris from the Site for offsite disposal. During demolition, consider the following: Presence of possible hazardous building materials; Presence of drain lines containing petroleum and/or hazardous materials; Presence of petroleum and/or hazardous materials containers; and Proximity of buildings to Wilson Stream.
6. Once the Site buildings have been raised and debris removed from the Site, assess the most effective remedial action to mitigate human health exposure and ecological risk due to impacted soil (hotspot removal, clean cover capping, etc.); and

7. Place a deed restriction on the Site limiting future redevelopment to commercial and/or industrial activity (unless additional assessment work is conducted to allow for residential and park user uses).

Letter Report: “Re: Asbestos Consulting Services”, prepared by TRC Environmental Corporation (TRC), dated December 2015

TRC issued this letter report to MEDEP, presenting the results of their limited inspection and sampling for asbestos at the Site, conducted in December of 2015. At the request of MEDEP, TRC collected samples of roofing materials from three distinct roofing areas of the Site building, and submitted them for laboratory analysis. Two of the three samples collected tested non-detect for asbestos, while the third (Roof-3) was identified as ACM. The results of TRC’s roof testing are confirmed by sampling conducted during Ransom’s supplemental roofing survey, presented herein. It is noted that TRC’s roof sampling was limited in extent, and included only roof field materials, not flashings, sealants, mastics, etc.

2.3 Areas of Concern and Contaminants of Concern

Historic environmental assessments completed at the Site have addressed many of the RECs, which have previously been identified. However, several data gaps remained, and are outlined in the three Areas of Concern (AOCs) summarized below.

AOC 1: Sub-Slab Soils

The approximately 232,000 square-foot, four-story main manufacturing building was constructed in 1902 and has been operated as a woolen mill and the manufacturer of croquet sets, turnings, clothespins, and toothpicks. In the early 2000’s, the manufacturing building was used as a printing press, box cutting, and packing facility. The facility formerly generated and stored spent cleaning solvents, VOC-based paint and spray booth-related hazardous wastes, PCB-contaminated materials (transformers, capacitors, switches and ballasts), and hazardous flammable substances (methyl ethyl ketone, alcohol, acetone, toluene, and butyl acetate). Prior to off-Site disposal, hazardous waste was reportedly stored in various locations in the Site building, including a hazardous waste storage area located in the basement of the main manufacturing building. PCB-contaminated materials were reportedly stored on the concrete floor in the “motor and electrical equipment storage area, located at the ground floor level at the rear of the mill complex.” Additionally, the facility formerly maintained two Safety-Keen parts cleaners with 35-gallon and 5-gallon reservoirs containing spent solvents, one of which was located in the “concrete-floored machine shop area adjacent to the production area,” reportedly within 15 feet of a floor drain; and the second was located in the maintenance shop on the first floor of the manufacturing building. Additionally, floor drains, sumps, and open penstocks were observed throughout the basement of the main manufacturing building. Widespread staining, drums and containers (some of which showed evidence of leaking), and evidence of dumping were observed in the general vicinity of the floor drains/sumps.

As part of the TRC’s 2015 Phase II ESA, sediment samples were collected from floor drain sumps and found to contain EPH and metals above the Commercial Worker and/or Construction Worker Scenario RAGs. Historic Site operations inside the manufacturing building, releases of hazardous materials into sumps and floor drains, and spills/releases to the concrete floor of the manufacturing building may have adversely impacted sub-slab soils. Historic environmental assessments did not include the collection of any soil samples beneath the Site building slab; therefore, AOC 1 includes soils beneath the main manufacturing building slab.

Contaminants of Concern (COCs) associated with AOC 1 include VOCs, VPH, EPH with target PAHs, metals, and PCBs. If present, these contaminants would likely be detected in the area immediately beneath the existing building slab and/or immediately beneath floor drain sumps. Additionally, if cracks in the concrete slab are present, they may represent potential pathways for contaminants to reach the sub-slab soils. Potential human exposure routes associated with the COCs in this AOC include direct contact with impacted soils and inhalation/ingestions of dust during future building demolition and Site redevelopment activities.

AOC 2: Asbestos Containing Building Materials (Roof)

The existing Site buildings are proposed to be demolished in order to facilitate Site redevelopment. In accordance with MEDEP and U.S. EPA regulations, any redevelopment activities which involve the renovation or demolition of the Site buildings will require a pre-demolition impact survey, including and inspection for ACM. A Hazardous Materials Inventory (HMI) was previously completed for the Site; however, at the time of that HMI, access to the roof was not possible. In 2015, TRC collected three samples of roofing materials for analysis of asbestos; of the three samples analyzed; one was reported as containing greater than 1% asbestos by weight and, therefore, was considered ACM.

Potential human exposure routes associated with the COCs in this AOC include direct contact with asbestos and inhalation/ingestion of fibers during future building demolition.

AOC 3: Containers of Potentially Hazardous Materials/Wastes

The existing Site buildings are proposed to be demolished in order to facilitate Site redevelopment. Prior to demolition, all hazardous materials, wastes, and containers must be removed from Site and properly disposed. Consolidation and characterization of hazardous materials/wastes present in the Site buildings will be necessary prior to building renovation and/or demolition in order to protect worker safety and to maintain compliance with applicable storage, maintenance, and/or disposal regulatory criteria.

TRC performed a hazardous material/waste inventory as part of their Phase II ESA. A total of fifteen types of potentially hazardous materials were identified including the following: paints; adhesives; silica gel desiccant; possible gasoline; propane, oxygen, and acetylene tanks; photo-development liquids; light ballasts; hydraulic oil; and unidentified liquids.

The COCs associated with the on-site containers are primarily related to waste oil, heavy metals, and PCBs. Potential exposure routes associated with these containers include direct contact with chemicals and inhalation of fumes, particularly during any redevelopment/cleanup activity at the Site. These containers of potentially hazardous materials also represent a threat of release to the environment via active floor drains located throughout the building. Consolidation of these materials will eliminate the potential for accidental release of chemicals to floor drains and subsequently, Wilson Stream.

3.0 INVESTIGATION METHODOLOGY

The objective of this Supplemental Phase II ESA is to assist in evaluating data gaps and further document current environmental conditions and to what extent, if any, potential releases of on-Site OHM and off-Site sources (e.g., former mill operations) have adversely impacted environmental conditions at the Site. The Phase II ESA was also designed to collect sufficient data to characterize the environmental condition of the Site in relation to current risk-based regulatory standards, identify potential exposure risks to future Site occupants, and evaluate the suitability of the Site for redevelopment.

The scope of work for the Phase II ESA was based on the conceptual site model presented in the SSQAPP, and included advancement of five Geoprobe soil borings, the collection and chemical analysis of soil samples, the collection of roofing materials for laboratory analysis of asbestos, and waste container consolidation and characterization. Soil boring locations are shown on Figure 2, and roof sampling locations are shown on Figure 3.

3.1 Methodology

Geoprobe Soil Boring Advancements

On December 19, 2016, Ransom oversaw the advancement of five direct-push Geoprobe soil borings, identified as B101 through B105, by Environmental Projects, Inc. (EPI) of Auburn, Maine. The soil borings were advanced until refusal was encountered, or until the depth of the boring was a minimum of two feet below the groundwater table. Soil samples were collected continuously from each soil boring at 2 to 4 foot intervals and were field screened for total VOCs using a PID equipped with a 10.6 electron volt (eV) lamp and calibrated to an isobutylene standard; and for oil contamination using the oleophilic dye test in accordance with MEDEP SOP #TS004. Soil samples collected during the advancement of the soil borings and hand auger locations were visually classified in the field by Ransom, in general accordance with a modified Burmeister Soil Classification System. A log form was completed for each boring, and are included in Appendix A. These log forms contain organic vapor concentrations (as determined by field screening) and results from the oleophilic dye test sampling.

Soil Sampling and Analytical Testing

Samples were collected for laboratory analysis from the locations and depths based on observations in the field (visual or olfactory evidence of contamination) and/or proximity to the groundwater table. Soil samples were submitted to Alpha Analytical, LLC (Alpha) of Westborough, Massachusetts, for chemical analysis. Soil samples submitted for VOCs and VPH fractions were collected directly from the sampling equipment and transferred into laboratory-prepared containers. Non-volatile soil samples (EPH fractions, target PAHs, metals, and PCBs) were homogenized in the field and transferred into laboratory-prepared containers. The samples were preserved in the field in accordance with applicable protocols and delivered on ice under chain-of-custody protocol for laboratory analysis. Soil samples were submitted for the following chemical analysis based on the conceptual site model presented in the SSQAPP:

1. VOCs by U.S. EPA Method 8260B;
2. EPH fractions, including target PAHs, by Massachusetts Department of Environmental Protection (MADEP) Method Rev 1.1 using Selective Ion Monitoring (SIM);
3. VPH fractions, excluding the target petroleum VOCs, by MADEP Method Rev 1.1;

4. Total RCRA 8 Metals by U.S. EPA Method 6010B and Method 7471B (Mercury); and
5. PCBs by U.S. EPA Method 8082 via manual Soxhlet extraction.

A duplicate soil sample (DUP-1) was collected from the surficial soil sample (0-2 feet bgs) from Geoprobe Boring B102 and submitted for laboratory analysis for quality assurance/quality control (QA/QC) protocols as outlined in the SSQAPP. Please see Figure 2 for a Site Plan showing soil boring and sample locations.

Sampling of Roofing Material for Asbestos

Based on previous investigations at the Site, a review of aerial photography, and conversations with MEDEP personnel, Ransom developed a preliminary assessment and sampling plan, in accordance with MEDEP inspection and sampling protocols, prior to mobilizing to the Site. The roof of the Main building was divided by distinct building areas, and conceptually designated as a single homogeneous area, i.e., presumed to be same construction throughout. In order to confirm the homogeneity of roofing areas, Ransom directed the advancement of one or more core cut samples from the field of each of 7 distinct roof areas, pre-designated by Ransom as areas A through G. Roof area H was not accessed or sampled as part of this investigation, due to concerns about the safety/structural integrity of this roof. Core cuts were advanced by Ransom's subcontractor, Roof Systems of Bangor, Maine, under the direction of Ransom, and were collected whole and intact, from the roof surface, down to the wood roof deck. A roof overview plan showing locations of samples testing positive for asbestos, and areas of inferred ACM roofing, is provided as Figure 3. A photograph log showing representative core cut locations and general roof overviews is provided as Appendix B.

The surface layer of each core cut was determined in the field to be visually identical: a single layer of asphalt roll roofing, lapped at the edges. Additional older layers of roofing materials were identified in limited locations, underlying the roll roofing layer, and were quantified and designated with unique sample names in the field (GG and E2). Based on observations made during the roofing assessment, Ransom collected samples of several asphalt-based roofing materials and associated sealants, which are considered suspect ACM. In addition to roof field materials, Ransom oversaw core cuts into the perimeter flashing materials, at the outside edges of several roof areas. Distinct flashing sealants were observed in these cuts, which were submitted for separate analysis. Ransom also collected samples of a silver weatherproofing sealant material, which was observed applied across the majority of the roof area. Ransom collected and submitted samples of asphalt shingles from each of the two free-standing wood-framed shed structures, located to the south of the Main Building.

Waste Consolidation and Characterization

On December 19, 2016, Ransom oversaw the consolidation and characterization of potential hazardous material containers, observed to be stored at various locations throughout the Site. EPI of Auburn, Maine collected waste containers from safely-accessible areas of the Site and building interiors and transported them to the slab-on-grade metal storage building onsite. Empty and non-hazardous containers were disposed, and remaining containers were inventoried and placed on poly sheeting.

EPI conducted field screening of the container contents, and grouped similar chemicals together. A representative product waste characterization sample was collected from each type of material (five samples total) and submitted for laboratory analysis of the following parameters:

1. pH by U.S. EPA Method 9040C/9045C;
2. Flashpoint by U.S. EPA Method 1010 (Ignitability);
3. Metals by U.S. EPA Method 6010C and Method 7471B for Mercury; and
4. PCBs by U.S. EPA Method 8081/8082.

3.2 Background Samples

Considering the historical industrial nature of the Site and vicinity, it was anticipated that site-specific background samples would be elevated due to historical contamination. Therefore, Ransom relied on typical Maine background levels, as presented in the 2016 MEDEP RAGs, to compare site-specific soil concentrations of metals and target PAHs with background soil conditions at the Site during this Phase II ESA. MEDEP's published background concentrations are included in Table 1 with the soil sample analytical results.

3.3 Target AOCs and Specific Exploration Locations

As previously noted, three AOCs were identified at the Site and were targeted for investigation. The targeted Phase II investigations relative to these AOCs are further summarized in the paragraphs below.

AOC 1: Sub-Slab Soils

Evaluation of AOC 1 included advancement of five direct-push Geoprobe soil borings (B101 through B105), field screening soils for total VOCs using a PID and for oil contamination using the oleophilic dye test, and collection of one soil sample from each boring from depths determined based on field screening results, as follows:

- Soil Sample B101, 4-6'
- Soil Sample B102, 0-2'
- Soil Sample B103, 0-2'
- Soil Sample B104, 0-2'
- Soil Sample B105, 0-2'

AOC 2: Asbestos Containing Building Materials (Roof)

Evaluation of this AOC included advancement of core cuts in the fields and perimeters of each of 7 distinct areas of flat roof identified on the Main Building, as described in Section 3.1. Based on an evaluation of roofing profiles observed in the core cuts, Ransom selected representative samples/sample sets to submit for laboratory analysis. In addition, Ransom collected one sample set of a roofing sealant, which was observed applied across the majority of the main building roofs, as well as samples of asphalt shingles from each of 2 free-standing outbuildings (the Paint Shop and the Sawdust Shed). In sum, Ransom submitted 24 subsamples, comprising 14 sample sets, for laboratory analysis for asbestos, via U.S. EPA method 600 (PLM), with Gravimetric Reduction Method (GRM) for Non-Friable Organically

Bound Bulk Materials, in accordance with MEDEP requirements. A complete listing of types and locations of roofing samples submitted for analysis can be found in Table 2.

AOC 3: Containers of Potential Hazardous Materials/Wastes

Evaluation of AOC included the collection, consolidation and characterization of potential hazardous material containers throughout the Site. Empty and non-hazardous containers were disposed, and remaining containers were inventoried and placed on poly sheeting. A representative product waste characterization sample was collected for laboratory analysis from each type of material (four samples total) as follows:

- Petroleum Distillate Waste #1
- Acid Waste #2
- Photo Chemical Waste #3
- Flammable Liquid Waste #4

4.0 RESULTS

The following subsections document the results of the Phase II ESA. Soil sample analytical results are summarized in Table 1, asbestos sample results are summarized in Table 2, and waste characterization sample results are summarized in Table 3. Copies of the laboratory chemical analysis data reports are provided as Appendix C.

4.1 Comparison to Regulatory Standards and Guidelines

The analytical results of soil samples collected at the Site were compared to the MEDEP Bureau of Remediation and Waste Management's (BRWM's) "*Remedial Action Guidelines (RAGs) for Sites Contaminated with Hazardous Substances*," dated February 5, 2016. Since the Site is proposed to be redeveloped for commercial or light industrial purposes, the MEDEP RAGs for the "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios would be the most applicable clean-up guidelines for the purpose of comparing the soil results obtained during the Supplemental Phase II ESA.

The objective of the roof sampling was to determine if asbestos is present prior to proposed building demolition. OSHA defines ACM as "any material containing more than one percent asbestos." MEDEP defines ACM as "any material containing asbestos in quantities greater than or equal to one percent by volume as determined by weight, visual evaluation, and/or point count analysis."

The objective of the waste consolidation and characterization sampling was to evaluate the contents of drums and containers on-site, and determine appropriate disposal methods for the hazardous waste containers which are currently present on-Site. Results from this evaluation were compared to MEDEP Chapter 860 Waste Oil Management Rules and MEDEP Chapter 850 Identification of Hazardous Wastes, as appropriate.

4.2 Geology and Hydrogeology

Based on our observations during this Supplemental Phase II ESA, soils beneath the building slab are generally comprised of sand with broken rock and cobbles. According to the 2015 TRC Phase II ESA (which included soil borings throughout the Site), soils onsite were observed to be generally silty sand with gravel and cobbles.

A groundwater assessment was not conducted, as part of this Supplemental Phase II ESA; however, according to the 2015 TRC Phase II ESA, groundwater at the Site was observed in temporary monitoring wells at depth ranging from 4.65 to 14.3 feet below ground surface (bgs), and generally flowed in a southern to eastern direction, towards Wilson Stream.

4.3 Summary of Laboratory Analytical Results for Soil Samples

Volatile Organic Compounds

As shown in Table 1, VOCs were not detected in any of the samples at concentrations above their respective laboratory reporting limits.

Polycyclic Aromatic Hydrocarbons

As shown in Table 1, PAHs were not detected in any of the samples at concentrations above their respective laboratory reporting limits.

Volatile Petroleum Hydrocarbons Fractions

As shown in Table 1, VPH fractions were not detected in any of the samples at concentrations above their respective laboratory reporting limits.

Extractable Petroleum Hydrocarbons Fractions

As shown in Table 1, soil sample “B103, 0-2” contained EPH fraction C₁₁–C₂₂ aromatics at a concentration of 20.5 mg/kg, and soil sample “B105, 0-2” contained EPH fraction C₁₉–C₃₆ aliphatics at a concentration of 17.8 mg/kg. Both results are below their respective MEDEP RAGs for the “Outdoor Commercial Worker” and “Excavation/Construction Worker” exposure scenarios.

Remaining soil samples did not contain EPH fractions at concentrations which exceeded their respective laboratory reporting limits.

Polychlorinated Biphenyls

As shown in Table 1, PCBs were not detected in any of the samples at concentrations above their respective laboratory reporting limits.

RCRA 8 Metals

As shown in Table 1, all of the soil samples collected had detectable concentrations of arsenic, barium, cadmium and chromium; however, none of the concentrations exceeded their respective MEDEP RAGs for Outdoor Commercial Worker or Excavation/Construction Worker exposure scenarios.

4.4 Summary of Laboratory Analytical Results for Asbestos Roof Samples

As shown in Table 2, asbestos was detected in samples of roofing materials collected from the Site buildings. Specifically, the field of roofing area G, sealants identified in roof perimeter flashings, the “silver coat sealant” applied to the majority of the Main building roof, and the asphalt shingles on the Paint Shed building were each identified as ACM. Laboratory analytical results, and estimated quantities of identified ACM can be found in Table 2. Locations of samples testing positive for asbestos, as well as estimated areas of ACM roofing are shown on Figure 3.

4.5 Summary of Laboratory Analytical Results for Waste Characterization Samples

As part of the consolidation and characterization of potential hazardous material onsite, waste containers were collected from safely-accessible areas of the Site and transported to the metal storage building. The inventory identified five different types of wastes in the following approximate quantities: approximately 30 gallons of waste oil (separated into fourteen 5-gallon containers, two 1-gallon containers, and 30 oil filters); 1 pint of acid waste (in a 1-gallon container); 10 gallons of photochemical waste (separated into

two 5-gallon containers and thirteen 1-gallon containers); 35 gallons of flammable liquid (separated into one 55-gallon drum, two 5-gallon containers, and four 1-gallon containers); and 1 quart of alkaline liquid (in a 5-gallon container). A copy of the EPI inventory is included as Appendix D.

A total of four samples were collected and submitted for laboratory analysis of pH, Flashpoint, Metals, and PCBs. Please see Table 3, and the following paragraphs, for a summary of results:

- Sample “Petroleum Distillate Waste #1” was collected from a representative waste oil container. This sample had a pH of 6.3 and a flashpoint which exceeded 150 degrees Fahrenheit. This sample did not contain concentrations of PCBs or total metals at concentrations which exceeded the laboratory reporting limits; as such, it is anticipated to be profiled and characterized as non-hazardous.
- Sample “Acid Waste #2” was collected from the 1-gallon container containing an unknown acid. This sample had a pH of 5.8 and a flashpoint which exceeded 150 degrees Fahrenheit. This sample did not contain concentrations of PCBs or total metals at concentrations which exceeded the laboratory reporting limits; as such, it is anticipated to be profiled and characterized as non-hazardous.
- Sample “Photo Chemical Waste #3” was collected from a representative photochemical container. This sample had a pH of 5.7 and a flashpoint which exceeded 150 degrees Fahrenheit. This sample did not contain concentrations of PCBs or total metals at concentrations which exceeded the laboratory reporting limits, with the exception of chromium, which was detected at concentrations below the standards outlined in the Chapter 860 Waste Oil Management Rules for Specification Waste Oil, and MEDEP Chapter 850 Identification of Hazardous Wastes. As such, this material is anticipated to be profiled and characterized as non-hazardous.
- Sample “Flammable Liquid Waste #4” was collected from a representative flammable liquid container. This sample had a pH of 3.7 and a flashpoint which exceeded 150 degrees Fahrenheit. This sample did not contain concentrations of PCBs or total metals at concentrations which exceeded the laboratory reporting limits; as such, it is anticipated to be profiled and characterized as non-hazardous.

5.0 QUALITY ASSURANCE / QUALITY CONTROL

Soil and waste characterization samples were analyzed by Alpha of Westborough, Massachusetts. Bulk asbestos samples were analyzed by Optimum Analytical and Consulting, LLC of Salem, New Hampshire. Both labs provided analysis and data according to standard operating protocols and laboratory data validation guidance included in Ransom's Generic QAPP for Brownfield sites in Maine. Each lab provided the following information in their analytical reports, where applicable:

1. Data results sheets;
2. Method blank results;
3. Surrogate recoveries and acceptance limits;
4. Duplicate results/acceptance limits;
5. Spike/duplicate results/acceptance limits;
6. Laboratory control sample results;
7. Description of analytical methods and results; and
8. Other pertinent results/limits as deemed appropriate.

As outlined in the Generic QAPP, at the completion of the field tasks and receipt of the analytical results, a data usability analysis was conducted to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The following sections present this analysis.

5.1 Precision

Precision measures the reproducibility of measurements. The precision measurement is established using the relative percent difference (RPD) between the duplicate sample results. Relative percent differences were calculated for soil, groundwater, and soil vapor samples, where both sample and duplicate values were greater than five times the Practical Quantitation Limit (PQL) of the analyte. The RPD is calculated as follows:

$$\text{RPD} = \frac{(\text{Sample Result} - \text{Duplicate Result}) \times 100}{\text{Mean of the Two Results}}$$

The general acceptance criteria or guidelines for field duplicates is 50 percent RPD for soil samples.

One duplicate soil sample and one duplicate waste characterization sample was collected for laboratory analysis. The duplicate soil sample (DUP1) was collected from soil boring B102 at a depth of 0 to 2 feet bgs, and was submitted for laboratory analysis of VOCs, EPH fractions including target PAHs, VPH fractions excluding the target petroleum VOCs, total RCRA 8 Metals, and PCB. The duplicate waste characterization sample ("Pet Duplicate") was collected from waste sample "Petroleum Distillate Waste #1" and was submitted for laboratory analysis of pH, flashpoint, PCBs, and total metals. A summary of duplicate soil sample analytical results and calculated RPDs is presented in the attached Table 4, and a

summary of the duplicate waste sample analytical results and calculated RPDs is presented in the attached Table 5.

Soil Sample (DUP1)

No VOCs, VPH, EPH, PAHs or PCBs were detected in the soil sample and its duplicate soil sample above their respective laboratory reporting limits and/or concentrations greater than five times their PQLs. Therefore, no RPDs were applicable for these COCs.

Of the total RCRA 8 metals analyzed, three were detected in soil sample and its duplicate soil sample at concentrations greater than five times their PQL for the compounds (arsenic, barium and chromium). The RPDs for these three compounds are below the 50 percent guideline; therefore, the precision of these sample results is acceptable.

Waste Characterization Sample (Pet Duplicate)

No PCBs or total metals were detected in the waste sample and its duplicate waste sample above their respective laboratory reporting limits and/or concentrations greater than five times their PQLs. Therefore, no RPDs were applicable for these COCs.

The RPD for pH between the waste sample and its duplicate waste sample is below the 50 percent guideline; therefore, the precision of these sample results is acceptable.

Asbestos Samples

Duplicate samples of suspect ACM were submitted to Optimum, in accordance with Maine asbestos sampling requirements, which require minimum triplicate analysis of samples in order for a material to be deemed negative for asbestos. Bulk samples of 14 distinct suspect ACM were submitted for triplicate laboratory analysis, 10 of which tested negative for asbestos. Of these 10 samples sets testing negative for asbestos, each of the corresponding triplicate analyses were also consistently non-detect. The precision of the sample results is, therefore, deemed to be acceptable.

5.2 Bias

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials, as independent as possible from those used in the calibration of the measurement system. Bias assessments were based on the analysis of spiked samples, so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important to obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicate samples (MS/MSD) were used to assess bias, as prescribed in the specified methods. Acceptable recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods.

The lab provides quality control non-conformance reports that indicate if Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD) and/or MS/MSD had low, failing, or high recoveries, and if the sample result was affected. Likewise, the lab reports any compounds that had

failing RPDs in the LCS/LCSD pair or the MS/MSD pair. This indicates the percent difference between the lab sample and its duplicate or the spike and its duplicate.

As outlined in Section 4.3, VOCs, VPH, PAHs, and PCBs were not detected in any of the soil samples at concentrations above their respective laboratory reporting limits. Additionally, PCBs were not detected in any of the waste samples at concentrations above their respective laboratory limits. As such, laboratory bias issues, if present in these samples, are not anticipated to represent a concern.

Extractable Petroleum Hydrocarbons (Soil)

There were no bias issues identified by the laboratory in the soil sample collected and analyzed for EPH.

Total Metals (Soil and Waste)

There were no bias issues identified by the laboratory in the soil or waste samples collected and analyzed for lead.

Asbestos

MS/MSD are not required protocols of U.S. EPA Method 600, and were not employed during laboratory analysis for asbestos. Therefore, no determination of laboratory bias was assessed for asbestos samples submitted for analysis.

5.3 Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. Therefore, it reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. For volatile organic compounds, surrogate compound recoveries are also used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples will also be used to provide additional information for assessing the accuracy of the analytical data being produced. Both accuracy and precision are calculated for each analytical batch, and the associated sample results are interpreted by considering these specific measurements.

The lab provides a non-conformance summary that reports if the quality control criteria, including initial calibration, calibration verification, surrogate recovery, holding time, and method accuracy/precision for analysis, were within acceptable limits. The laboratory non-conformance summary includes the following items:

- In waste samples “Petroleum Distillate #1” and “Pet Duplicate”, the surrogate recoveries were reportedly outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene and decachlorobiphenyl, due to interference with the Internal Standard. Because the samples did not contain these PCB compounds, at concentrations which exceeded the laboratory reporting limit, we do not anticipate these accuracy issues impact the conclusions or recommendations, contained herein.
- Waste Sample “Acid Waste #2” was not extracted within the method required holding time, due to laboratory oversight. Additionally, this sample reportedly had elevated

detection limits for PCBs and metals, due to the limited sample volume available for analysis. However, because this sample did not contain contaminants of concern, at concentrations which exceeded the laboratory detection limits, we do not anticipate this accuracy issue impacts the conclusions or recommendation, contained herein.

5.4 Representativeness

Objectives for representativeness are defined for each sampling and analysis task and are a function of the investigative objectives. Representativeness was accomplished during this project through use of standard field, sampling, and analytical procedures.

The SSQAPP stated that six soil borings would be completed and six soil samples would be collected from AOC 1 (Sub-Slab Soils). Due to unavoidable field conditions, access limitations, and obstacles encountered during field activities, only five soil borings were completed and five soil samples were collected. Based on the sub-slab soil sampling results and Ransom's field observations, we feel confident that the five soil borings were adequate to appropriately assess the condition of soils beneath the building slab. Furthermore, the objectives for sampling and analytical representativeness, as specified in the SSQAPP, were met relative to asbestos sampling.

5.5 Comparability

Comparability is the confidence with which one data set can be compared to another data set. The objective for this QA/QC program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions, and using standard and comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability. Historical comparability shall be achieved through consistent use of methods and documentation procedures throughout the project.

5.6 Completeness

Completeness is calculated by comparing the number of samples successfully analyzed to the number of samples collected. The goal for completeness is 95 percent. The completeness for this project was 100 percent, as there were no samples that could not be analyzed, due to holding time violations, samples spilled or broken, or any other reason.

6.0 CONCLUSIONS

The Site is a portion of a larger parcel of land, encompassing 17.65 acres, which is located on both the northern and southern sides of Wilson Stream, between Depot Street and Village View Street. The full parcel of land is identified by the Town of Wilton Assessor's Office as Lots 94 on Tax Map 5; however, for the purposes of this report, the "Site" is considered only the portions of the property located on the northern side of Wilson Stream (between Wilson Stream and Depot Street).

Development at the Site began in 1903, when it was purchased by the Wilton Woolen Company, and the main manufacturing mill building was constructed. This building is an approximately 232,000 square-foot, four-story manufacturing building, which was operated as a woolen mill until the late 1950's, at which time Forster purchased the property and began manufacturing croquet sets, turnings, and clothespins. In 1955, Diamond Brands purchased the mill building and began manufacturing toothpicks. In the early 2000's, the main manufacturing building was used as a printing press, box cutting, and packing facility. The Site has been vacant/unused since circa 2010.

In the southern portion of the Site, two wood-framed buildings are also present, which were used in connection with former Site operations. One of the buildings is a historical sawdust storage shed, and the other is referred to as the Photo Shed, and may have historically been used for the temporary storage of hazardous waste, prior to its removal from Site. A slab-on-grade metal storage building, constructed sometime between 1940 and 1962, is located in the eastern portion of the Site. This building was historically used for storage of materials, and circa 1998, as an automobile storage facility for a local towing company.

Numerous historic environmental investigations and remedial actions have been completed at the Site over the past 25 years, including underground oil storage tank assessments and removals, Phase I and Phase II ESAs, partial asbestos abatement activities, and partial building demolition activities, among others. Most recently, the Site was assessed through the MEDEP Brownfield Assessment Program, and a Phase I and Phase II ESA were conducted under that program in June and December of 2015, respectively. At the conclusion of these assessments, several data gaps were identified, including the condition of sub-slab soils, confirmation of whether the building roofing materials contained asbestos, and characterization of the potentially hazardous materials present in the numerous drums and containers onsite. These issues required further assessment, prior to start of proposed Site cleanup activities.

To address the identified data gaps, in December of 2016, Ransom performed this Supplemental Phase II ESA, which included: the advancement of five direct-push Geoprobe soil borings within the building footprint to assess sub-slab soils; field screening of soils for total VOCs using a PID and for petroleum impacts, using the oleophilic dye test; collection of soil samples for laboratory analysis of VOCs, EPH fractions, including target PAHs, VPH fractions, excluding the target petroleum VOCs, total RCRA 8 Metals, and PCBs; collecting samples of roofing materials to determine if asbestos-containing building materials were present; the consolidation of potential hazardous waste containers throughout the Site; and collection of representative product waste characterization samples for laboratory analysis of pH, Flashpoint, Metals, and PCBs.

The Site is proposed for mixed use commercial and light industrial redevelopment; as such, the analytical results of soil samples were compared to the MEDEP BRWM's "RAGs for Sites Contaminated with Hazardous Substances," dated February 5, 2016 for the "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios. None of the sub-slab soil samples collected as part of this Supplemental Phase II ESA contained contaminant concentrations which exceeded these

regulatory cleanup guidelines; therefore, no further assessment or remedial actions are recommended at the Site in connection with sub-slab soils.

Also as part of this Supplemental Phase II ESA, Ransom conducted a roofing assessment, and collected samples of several asphalt-based roofing materials and associated sealants, which were considered suspect ACM. Asbestos was detected in samples of roofing materials collected from the Site buildings. Specifically, one large roof area near the westerly end of the Main building, sealants identified in roof perimeter flashings, the “silver coat sealant” applied to the majority of the Main building roof, and the asphalt shingles on the Paint Shed building were each identified as ACM.

As part of the consolidation and characterization of potential hazardous waste remaining on-Site, waste containers were collected from safely-accessible areas of the Site, transported to the metal storage building, placed on poly sheeting, inventories, and waste characterization samples were collected. None of the waste characterization samples collected contained contaminants which exceeded the standards outlined in the Chapter 860 Waste Oil Management Rules for Specification Waste Oil or the MEDEP Chapter 850 Identification of Hazardous Wastes; therefore, these waste materials are anticipated to be profiled and characterized as non-hazardous.

7.0 RECOMMENDATIONS

Based on the information obtained during this Supplemental Phase II ESA, Ransom recommends the following with respect to Site redevelopment:

1. The results of this Supplemental Phase II ESA, as well as the Phase I and Phase II ESAs completed in 2015 through the MEDEP Brownfield Assessment Program, should be submitted to the MEDEP VRAP. The MEDEP VRAP is a voluntary program that offers technical review of environmentally-impacted sites and ultimately provides state liability protections for interested parties, including a NAA letter, NFAA letter, and/or a "Certificate of Completion" letter (i.e., no further action required), provided that proper and appropriate environmental assessment and cleanup/remedial actions are completed, as approved by the MEDEP.
2. MEDEP VRAP will likely require a deed restriction and/or institutional control(s) in the form of a DEC to prohibit extraction of groundwater at the Site for drinking water use and potentially restrict/prohibit off-Site disposal of impacted soils and/or groundwater at the Site, without proper MEDEP notification/approvals and implementation of a S&GWMP and a Health and Safety Plan;
3. A S&GWMP should be prepared prior to Site redevelopment to insure proper characterization, handling, and management of impacted soils and groundwater during future Site redevelopment and/or subsurface earthwork-related activities at the Site. The S&GWMP may include, in part, the proposed reuse of impacted soils on-Site, where practical and per geotechnical requirements, and procedures for proper off-Site soil disposal for excess soils that cannot be reused on-Site;
4. ACM were identified associated with Site building roofs. Materials identified as ACM that may be impacted by future renovation or demolition of the Site building should be properly removed for off-Site disposal, prior to or during such activities;
5. Waste containers which have been consolidated in the metal storage building should be properly managed for off-Site transportation and disposal; and
6. As a likely condition of the MEDEP VRAP and assuming U.S. EPA Brownfields Cleanup funding will be utilized for cleanup of the Site, a formal Site-specific ABCA and/or Conceptual RAP should be prepared for review and approval by the MEDEP and U.S. EPA, prior to future Site cleanup, remedial actions, and redevelopment activities.

In addition to these recommendation, it should be noted that, as part of the 2015 Ransom Phase I ESA and the 2015 TRC Phase II ESA, several additional recommendations were made that should also be implemented prior to or during future Site redevelopment activities. These recommendations include: the four-story unsupported exterior masonry/brick wall should be stabilized or removed, as soon as possible to mitigate the safety hazard to site workers and trespassers; floor drains be addressed and mitigated during building demolition tasks; and a deed restriction be placed on the Site likely limiting future redevelopment to commercial and/or industrial activity, without further assessment and/or mitigation measures to further reduce risks to meet other potential reuse scenarios. Additionally, the TRC Phase II ESA identified the presence of contaminants in surficial soil samples on-Site at concentrations which exceed their applicable MEDEP cleanup guidelines. These impacted soils will likely require

management, as part future Site redevelopment activities; depending on Site reuse scenarios, additional cleanup actions may be required to mitigate exposure risks from the impacted surficial soils to future Site occupants and workers.

8.0 REFERENCES

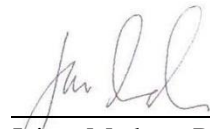
1. State of Maine Brownfields Assessment Projects Generic Quality Assurance Project Plan (QAPP) RFA #14028, Ransom Consultants, Inc., January 24, 2014.
2. MEDEP; February 5, 2016; Maine RAGs for Sites Contaminated with Hazardous Substances.
3. "ASTM Phase I Environmental Site Assessment, Forster Manufacturing, 81 Depot Street, Wilton, Maine, Revision 1," prepared by Ransom, dated June 29, 2015.
4. "Phase II Environmental Site Assessment Summary Report, Forster Mill, 581 Depot Street, Wilton, Maine," prepared by TRC Environmental Corporation (TRC), dated December 2015.
5. Letter Report: "Re: Asbestos Consulting Services", prepared by TRC Environmental Corporation (TRC), dated December 2015.
6. Site-Specific Quality Assurance Project Plan Addendum No. 58, Revision No. 1, Supplemental Phase II Environmental Site Assessment - Forster Manufacturing, 581 Depot Street, Wilton, ME, Ransom Consulting, Inc., November 22, 2016.

9.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

Ransom performed services in a manner consistent with the guidelines set forth in the American Society for Testing and Materials (ASTM) E 1903-97 (Standard Practices for Environmental Site Assessments: Phase II Environmental Site Assessment Process).

The following Ransom personnel possess the sufficient training and experience necessary to conduct a Phase II Environmental Site Assessment, and from the information generated by such activities, have the ability to develop opinions and conclusions regarding *recognized environmental conditions* in connection with the Site.

Environmental Professionals:



Jaime Madore, P.E.
Project Engineer



Lucas Hathaway
Environmental Scientist



Peter Sherr, P.E.
Principal / Senior Project Manager

TABLE 2: ASBESTOS TESTING RESULTS

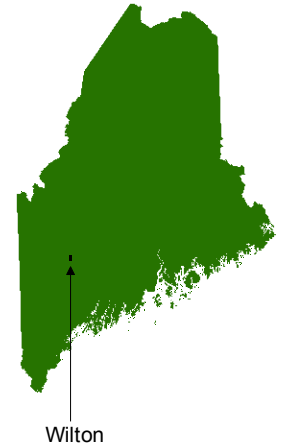
Roofing Assessment
Forster Manufacturing
581 Depot Street
Wilton, Maine

Material	Location	Sample Number	Asbestos Quantity and Type ²	Estimated Quantity
Silver Coat Sealant	Flat roofing area - throughout	SCSA	4.92% Chrysotile	100,000 SF
		SCSB and SCSC	NA/PS	
Tar & gravel roofing	Roof area E	E2A through E2C	NAD	--
Tar & gravel roofing	Roof area GG field	GGA through GGC	NAD	--
Perimeter flashing	Flat roofing areas - throughout	PFA	35.69% Chrysotile	3,500 LF
		PFB and PFC	NA/PS	
Asphalt shingle	Sawdust shed roof	05A through 05C	NAD	--
Asphalt shingle	Photo shed roof	PSA	NAD	1,200 SF
		PSB	1.98% Chrysotile	
		PSC	NA/PS	
Asphalt roll roofing	Roof area A field	A	NAD	--
Asphalt roll roofing	Roof area B field	B	NAD	--
Asphalt roll roofing	Roof area BB field	BB	0.38% Chrysotile	--
Asphalt roll roofing	Roof area C field	C	NAD	--
Asphalt roll roofing	Roof area D field	D	0.45% Chrysotile	--
Asphalt roll roofing	Roof area E field	E1	NAD	--
Asphalt roll roofing	Roof area F field	F	0.44% Chrysotile	--
Asphalt roll roofing	Roof area G field	G	1.15% Chrysotile	9,200 SF

NOTES:

- Samples were collected on December 19, 2016 by Ransom Consulting, Inc., and were analyzed by Optimum Analytical and Consulting, LLC, of Salem, New Hampshire.
- NAD = no asbestos detected. NA/PS = not analyzed/positive stop. Sample sets are analyzed until asbestos is identified in an amount greater than 1 percent.

Regional Locator Map



Wilton

SITE LOCATION

Notes

1. Data Source: USGS National Map Seamless Server, 24K DRG, 1/3" NED
2. USGS Quad Name: Wilton
3. Latitude: 44° 35' 24" N
Longitude: 70° 13' 18" W
UTM Northing: 4938119 mN
UTM Easting: 403038 mE

Scale and Orientation

0 1,000 2,000
1 inch = 2,000 feet



Prepared For

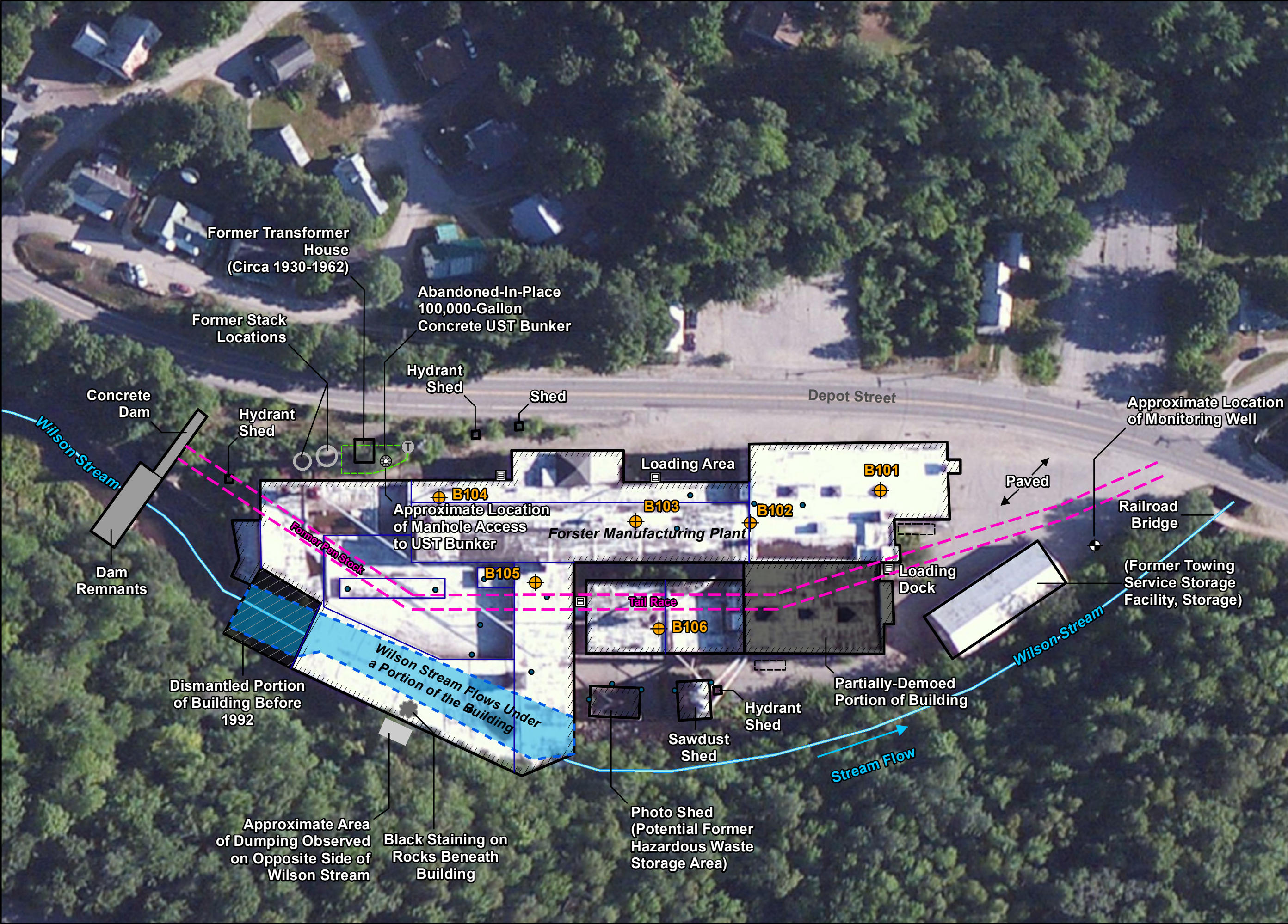
AVCOG
125 Manley Road
Auburn, Maine

Site Address

Forster Manufacturing Co.
581 Depot Street
Wilton, Maine

151.06123 Mar 2017

Figure 1
Site Location

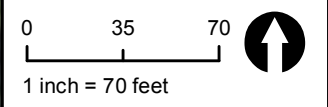


Legend & Notes

- Site Boundary
- Dumpster
- Former Transformer Location
- Proposed Soil Boring Location

- Notes
1. Site Plan based on Bing Orthophotography
 2. Some features are approximate in location and scale
 3. This plan has been prepared for Maine Department of Environmental Protection. All other uses are not authorized unless written permission is obtained from Ransom Consulting, Inc.

Scale & Orientation



Prepared For

Maine Department of
Environmental Protection
17 State House Station
Augusta, Maine

Site Address

Forster Manufacturing
581 Depot Street
Wilton, Maine

151.06123.013 | Mar 2017

Figure 2
Site Plan

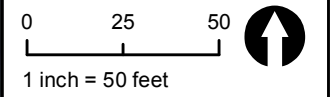


Legend & Notes

- A** Roof Area
- Sample Testing Positive for Asbestos
- Sample Testing Negative for Asbestos
- Roof Field Area Testing Positive for Asbestos
- Roof Flashing Testing Positive for Asbestos

- Notes
1. Site Plan based on National Agricultural Imagery Program Orthophotography
 2. Some features are approximate in location and scale
 3. This plan has been prepared for AVCOG. All other uses are not authorized unless written permission is obtained from Ransom Consulting, Inc.

Scale & Orientation



Prepared For

AVCOG
125 Manley Road
Auburn, Maine

Site Address

Forster Manufacturing Co.
581 Depot Street
Wilton, Maine

151.06123.013 | Mar 2017

Figure 3
Site Plan

APPENDIX A

Soil Boring Logs

**Supplemental Phase II Environmental Site Assessment
Forster Manufacturing Mill
581 Depot Street
Wilton, Maine**

APPENDIX B

Photograph Log

Supplemental Phase II Environmental Site Assessment
Forster Manufacturing Mill
581 Depot Street
Wilton, Maine

Photograph Log



Partial overview of Site building roofs, showing roofing areas A, C, D (L-R). View is to the west.



Partial overview of Site building roofs, showing roofing areas C, D (L-R). View is to the west.



Partial overview of Site building roofs, showing roofing areas B, E, F (fore to back). View is to the west.



Partial overview of Site building roofs, showing roofing areas G/GG, F, H (fore to back). View is to the southwest.



Partial overview of Site building roofs, showing roofing area H, which was not accessed for safety reasons. View is to the west.



Partial overview of Site building roofs, showing roofing areas C, E, B, A (L-R, fore to back). View is to the east.

Photograph Log



One of several core cut sample locations collected from various roofing areas



Closer view of core cut sample with only asphalt roll roofing, coated with silver ACM sealant (Sample D)



Closer view of core cut sample with silver coat, asphalt roll roofing, over tar & gravel "built-up" roofing. (Sample E2).



Silver coat sealant, observed applied to the large majority of roofing areas (Sample set SCS).

APPENDIX C

Certified Laboratory Analytical Results

Supplemental Phase II Environmental Site Assessment
Forster Manufacturing Mill
581 Depot Street
Wilton, Maine



Lucas Hathaway
Ransom Environmental Consultants, Inc
400 Commercial St
Portland ME 04101

Project Reference: 151.06123.013
Laboratory Batch #: 1719213
Date Samples Received: 01/04/2017
Date Samples Analyzed: 01/06/2017
Date of Final Report: 01/09/2017

SAMPLE IDENTIFICATION:

Twenty Six (26) samples from AVCOG; Forster Mill; Wilton, ME project were submitted by Client on 01/04/2017

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter ($<0.25\mu\text{m}$) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit $<1\%$, Reporting Limits: CVES = 1% , 400 Point Count = $.25\%$, 1000 Point Count = 0.1% ; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

ORDER #: 1719213
PROJECT #: 151.06123.013
DATE COLLECTED: 12/19/2016
COLLECTED BY: Client
DATE RECEIVED: 01/04/2017
ANALYSIS DATE: 01/06/2017
REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1719213-001 SCSA	Throughout Silver Coat Sealant, Silver	LAYER 1 100%	Chrysotile	4.92%	Cellulose Fiber Non-Fibrous Material	1% 94.08%
Total % Asbestos:				4.9%	Total % Non-Asbestos: 95.1%	
1719213-002 SCSB	Throughout Silver Coat Sealant, Positive Stop	LAYER 1 100%				
1719213-003 SCSC	Throughout Silver Coat Sealant, Positive Stop	LAYER 1 100%				
1719213-004 E2A	Roof Section E Tar and Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-005 E2B	Roof Section E Tar and Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-006 E2C	Roof Section E Tar and Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-007 GGA	Roof Section GG Tar & Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 40% 59%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-008 GGB	Roof Section GG Tar & Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 40% 59%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

ORDER #: 1719213
PROJECT #: 151.06123.013
DATE COLLECTED: 12/19/2016
COLLECTED BY: Client
DATE RECEIVED: 01/04/2017
ANALYSIS DATE: 01/06/2017
REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1719213-009 GGC	Roof Section GG Tar & Gravel Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 40% 59%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1719213-010 PFA	Throughout Perimeter Flashing, Black	LAYER 1 100%	Chrysotile	35.69%	Cellulose Fiber Non-Fibrous Material	1% 63.31%
Total % Asbestos:			35.7%		Total % Non-Asbestos: 64.3%	
1719213-011 PFB	Throughout Perimeter Flashing, Positive Stop	LAYER 1 100%				
1719213-012 PFC	Throughout Perimeter Flashing, Positive Stop	LAYER 1 100%				
1719213-013 SSA	Sawdust Shed Asphalt Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	60% 40%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1719213-014 SSB	Sawdust Shed Asphalt Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	60% 40%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1719213-015 SSC	Sawdust Shed Asphalt Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	60% 40%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1719213-016 PSA	Paint Shed Asphalt Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	60% 40%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

ORDER #: 1719213
PROJECT #: 151.06123.013
DATE COLLECTED: 12/19/2016
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ANALYSIS DATE: 01/06/2017
REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1719213-017 PSB	Paint Shed Asphalt Shingle, Black	LAYER 1 100%	Chrysotile	1.98%	Cellulose Fiber Non-Fibrous Material	60% 38.02%
Total % Asbestos:				2.0%	Total % Non-Asbestos: 98.0%	
1719213-018 PSC	Paint Shed Asphalt Shingle Roof, Positive Stop	LAYER 1 100%				
1719213-019 A	Roof Section A Asphalt Roll Roofing, Black/Silver	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 80%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-020 B	Roof Section B Asphalt Roll Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 80%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-021 BB	Roof Section BB Asphalt Roll Roofing, Black	LAYER 1 100%	Chrysotile	0.38%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 79.62%
Total % Asbestos:				<1%	Total % Non-Asbestos: 99.6%	
1719213-022 C	Roof Section C Asphalt Roll Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 80%
Total % Asbestos:				No Asbestos Detected	Total % Non-Asbestos: 100.0%	
1719213-023 D	Roof Section D Asphalt Roll Roofing, Black	LAYER 1 100%	Chrysotile	0.45%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 79.55%
Total % Asbestos:				<1%	Total % Non-Asbestos: 99.6%	



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

ORDER #: 1719213
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COLLECTED BY: Client
DATE RECEIVED: 01/04/2017
ANALYSIS DATE: 01/06/2017
REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1719213-024 E1	Roof Section EE Asphalt Roll Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 80%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1719213-025 F	Roof Section F Asphalt Roll Roofing, Black	LAYER 1 100%	Chrysotile	0.44%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 79.6%
Total % Asbestos:			<1%		Total % Non-Asbestos: 99.6%	
1719213-026 G	Roof Section G Asphalt Roll Roofing, Black	LAYER 1 100%	Chrysotile	1.15%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 10% 78.8%
Total % Asbestos:			1.2%		Total % Non-Asbestos: 98.9%	

**Analyst
Signatory:**

Kristina Scaviola

NVLAP[®]
Lab Code: 101433-0



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Analytical and Consulting, LLC

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CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1719213
PROJECT #: 151.06123.013
DATE COLLECTED: 12/19/2016
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ANALYSIS DATE: 01/06/2017
REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

Client	Ransom Consulting, Inc. 400 Commercial St Portland ME 04101	
Contact	Lucas Hathaway	
Phone	207-772-2891	
Project	Forster Mill	
Location	Wilton ME	
Ransom Client	AVCOG	
Ransom Project #	151.06123.013	
Sample Date	12/19/2016	
Analysis	Bulk PLM/Gravimetric Reduction for asbestos	
TAT	Standard	
Report Results to:	lucas.hathaway@ransomenv.com	
PO	9720	
Notes/Requests	Please analyze NOB samples via Gravimetric Reduction, per MED/Positive Stop for on labeled sample sets Please HOLD analysis of Sample H until further notice	
Sample ID	Material	Location
SCSA	Silver Coat Sealant	Throughout
SCSB	Silver Coat Sealant	Throughout
SCSC	Silver Coat Sealant	Throughout
E2A	Tar & Gravel Roofing	Roof Section E
E2B	Tar & Gravel Roofing	Roof Section E
E2C	Tar & Gravel Roofing	Roof Section E
GGA	Tar & Gravel Roofing	Roof Section GG
GGB	Tar & Gravel Roofing	Roof Section GG
GGC	Tar & Gravel Roofing	Roof Section GG
PFA	Perimeter Flashing	Throughout
PFB	Perimeter Flashing	Throughout
PFC	Perimeter Flashing	Throughout
SSA	Asphalt Shingle	Sawdust Shed
SSB	Asphalt Shingle	Sawdust Shed
SSC	Asphalt Shingle	Sawdust Shed
PSA	Asphalt Shingle	Paint Shed
PSB	Asphalt Shingle	Paint Shed

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CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

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PSC	Asphalt Shingle
A	Asphalt Roll Roofing
B	Asphalt Roll Roofing
BB	Asphalt Roll Roofing
C	Asphalt Roll Roofing
D	Asphalt Roll Roofing
E1	Asphalt Roll Roofing
F	Asphalt Roll Roofing
G	Asphalt Roll Roofing
H	Asphalt Roll Roofing

Paint Shed
Roof Section A
Roof Section B
Roof Section BB
Roof Section C
Roof Section D
Roof Section EE
Roof Section F
Roof Section G
Roof Section H

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1719213



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Analytical and Consulting, LLC

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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: AVCOG; Forster Mill; Wilton, ME

ORDER #: 1719213
PROJECT #: 151.06123.013
DATE COLLECTED: 12/19/2016
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REPORT DATE: 01/09/2017
ANALYST: Kristina Scaviola

Non-Friable Organically Bound Gravimetric Reduction Worksheet														
Batch Number: 1719213			Prep Date: 1/9/2017			Prep Analyst: LEO								
Sample ID	Crucible ID	Crucible Weight	Sample Weight	Crucible + Sample Weight	% Reduction (DBT-100)	Filter Weight G	Asked Sub-Sample Weight H	Filtered Sample Weight I	Reduct Inorganic Weight J	% Reduction by J710034	CVE % Absence in Residue	% Absence in CVE %	Adbestos Type	Prep 1
SCSA	201	25.074	0.509	25.583	0.215	0.039	0.215	0.16	0.121	56.28%	8.75%	4.92%	chrys	7
SCSB	247	20.785	0.485	21.270	0.217	0.042	0.217	0.172	0.131	60.37%	8.75%	4.92%	chrys	7
SCSC	211	20.003	0.417	20.420	0.178	0.042	0.178	0.145	0.103	57.67%	8.75%	4.92%	chrys	7
E2A	225	20.514	0.984	21.498	0.267	0.041	0.267	0.302	0.261	92.74%	NAD	0.00%		
E2B	51	24.227	0.768	25.000	0.140	0.041	0.140	0.17	0.129	92.74%	NAD	0.00%		
E2C	241	20.699	0.762	21.461	0.140	0.041	0.140	0.17	0.129	92.74%	NAD	0.00%		
GGSA	213	22.392	0.597	22.989	0.318	0.041	0.318	0.365	0.324	101.89%	NAD	0.00%		
GGGB	249	21.806	0.645	22.451	0.096	0.04	0.096	0.068	0.028	32.66%	NAD	0.00%		
GGGC	20	24.008	0.762	24.770	0.095	0.04	0.095	0.068	0.028	29.47%	NAD	0.00%		
PFA	49	23.938	0.487	24.425	0.194	0.04	0.194	0.221	0.181	93.05%	38.25%	35.69%	chrys	41
PFB	224	22.025	0.566	22.591	0.181	0.04	0.181	0.149	0.109	90.05%	38.25%	35.69%	chrys	41
PFC	202	21.261	0.989	22.250	0.161	0.042	0.161	0.213	0.171	94.48%	38.25%	35.69%	chrys	41
SSA	243	22.082	0.723	22.805	0.512	0.042	0.512	0.523	0.481	93.95%	NAD	0.00%		
SSB	210	30.489	0.660	31.149	0.297	0.042	0.297	0.306	0.264	88.89%	NAD	0.00%		
PSA	79	30.820	0.777	31.597	0.284	0.042	0.284	0.282	0.24	84.51%	NAD	0.00%		
PSB	238	21.293	0.854	22.147	0.338	0.042	0.338	0.227	0.228	45.07%	NAD	0.00%		
PSB	53	25.270	0.826	26.096	0.338	0.042	0.338	0.227	0.228	32.78%	3.75%	1.98%	chrys	5
A	12	24.788	0.770	25.558	0.137	0.04	0.137	0.08	0.04	29.20%	NAD	0.00%		
B	76	28.244	1.065	29.309	0.219	0.041	0.219	0.097	0.056	25.50%	NAD	0.00%		
BB	40	23.821	1.103	24.924	0.379	0.04	0.379	0.072	0.032	8.44%	4.50%	0.00%	chrys	3
C	232	21.759	0.931	22.690	0.183	0.04	0.183	0.063	0.023	12.57%	NAD	0.00%		
D	232	21.759	0.931	22.690	0.306	0.042	0.306	0.063	0.025	8.17%	5.50%	0.45%	chrys	4
E	202	22.608	0.671	23.279	0.152	0.04	0.152	0.088	0.048	31.58%	NAD	0.00%		
F	202	22.608	0.671	23.279	0.225	0.043	0.225	0.081	0.018	8.08%	5.50%	0.44%	chrys	3
G	212	21.888	0.661	22.549	0.222	0.041	0.222	0.072	0.031	13.96%	8.25%	1.15%	chrys	10

APPENDIX D

Waste Inventory

Supplemental Phase II Environmental Site Assessment
Forster Manufacturing Mill
581 Depot Street
Wilton, Maine

DOCUMENT 004113 - BID FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: **Abatement and Demolition of the Former Forster Mill.**
- C. Project Location: **581 Depot Street, Wilton, Maine.**
- D. Owner: **Town of Wilton, 158 Weld Road, Wilton, Maine.**
- E. Engineer: **Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.**
- F. Engineer Project Number: **161.06104.**

1.2 CERTIFICATIONS AND BID(S)

- A. *Contractor may bid on one or any of the Tasks, below.*
- B. **Task 1 Contract:** The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Ransom Consulting, Inc., having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of Task 1, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
 - 1. _____ Dollars (\$_____).
 - 2. The above amount is derived from amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form".
- C. **Task 2 Contract:** The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Ransom Consulting, Inc., having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of Task 2, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
 - 1. _____ Dollars (\$_____).
 - 2. The above amount is derived from amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form".

1.3 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within ten days after a written Notice of Award, if offered within 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the *total* bid amount above:
1. _____ Dollars (\$_____).
- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 SUBCONTRACTORS AND SUPPLIERS

- A. The following companies shall execute subcontracts for the portions of the Work indicated:
1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Engineer, and shall achieve Substantial Completion as noted in Section 003113 "Preliminary Schedule."

1.6 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.

1.7 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of Maine, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.8 SUBMISSION OF BID

- A. Respectfully submitted this ____ day of _____, 2017.
- B. Submitted By _____ (Name of bidding firm or corporation).
- C. Authorized Signature: _____ (Handwritten signature).
- D. Signed By: _____ (Type or print name).
- E. Title: _____.
- F. Witness By: _____ (Handwritten signature).
- G. Attest: _____ (Handwritten signature).
- H. By: _____ (Type or print name).
- I. Title: _____.
- J. Street Address: _____.
- K. City, State, Zip _____.
- L. Phone: _____.
- M. License No.: _____.
- N. Federal ID No.: _____ (Affix Corporate Seal Here).

END OF DOCUMENT 004113

DOCUMENT 004313 - BID SECURITY FORMS

1.1 BID FORM SUPPLEMENT

- A. A completed bid bond form is required to be attached to the Bid Form.

1.2 BID BOND FORM

- A. AIA Document A310, "Bid Bond," is the recommended form for a bid bond. A bid bond acceptable to Owner, or other bid security as described in the Instructions to Bidders, is required to be attached to the Bid Form as a supplement.
- B. Copies of AIA standard forms may be obtained from The American Institute of Architects; www.aia.org/contractdocs/purchase/index.htm; email: docspurchases@aia.org; (800) 942-7732.

END OF DOCUMENT 004313

DOCUMENT 004322 - UNIT PRICES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: **Abatement and Demolition of the Former Forster Mill.**
- C. Project Location: **581 Depot Street, Wilton, Maine.**
- D. Owner: **Town of Wilton, 158 Weld Road, Wilton, Maine.**
- E. Engineer: **Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.**
- F. Engineer Project Number: **161.06104.**

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder proposes that the sum of the amounts below equal the Contract Sum presented in the Bid Form.
- C. Contractor may bid on any or all of the Tasks presented, below.

1.3 UNIT PRICES – TASK 1

- A. Unit-Price No. 1: Asbestos Abatement
 - 1. _____ Dollars (\$_____) per lump sum.

1.4 UNIT PRICES – TASK 2

- A. Unit-Price No. 2: Demolition of the Former Forster Mill – Demo Section 1.
 - 1. _____ Dollars (\$_____) per lump sum.

1.5 UNIT PRICES – TASK 3

- A. Unit-Price No. 3: Demolition of the Former Forster Mill – Demo Section 2.
 - 1. _____ Dollars (\$_____) per lump sum.

1.1 UNIT PRICES – TASK 4

A. Unit-Price No. 4: Demolition of the Former Forster Mill – Demo Section 3.

1. _____ Dollars (\$_____) per lump sum.

1.1 UNIT PRICES – TASK 5

A. Unit-Price No. 5: Demolition of the Former Forster Mill – Demo Section 4.

1. _____ Dollars (\$_____) per lump sum.

1.2 SUBMISSION OF BID SUPPLEMENT

A. Respectfully submitted this ____ day of _____, 2017.

B. Submitted By: _____ (Insert name of bidding firm or corporation).

C. Authorized Signature: _____ (Handwritten signature).

D. Signed By: _____ (Type or print name).

E. Title: _____.

END OF DOCUMENT 004322

DOCUMENT 004393 - BID SUBMITTAL CHECKLIST

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: **Abatement and Demolition of the Former Forster Mill.**
- C. Project Location: **581 Depot Street, Wilton, Maine.**
- D. Owner: **Town of Wilton, 158 Weld Road, Wilton, Maine.**
- E. Engineer: **Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.**
- F. Engineer Project Number: **161.06104.**

1.2 BIDDER'S CHECKLIST

- A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.
- B. Attach this completed checklist to the outside of the Submittal envelope.
 - 1. Used the Bid Form provided in the Project Manual.
 - 2. Prepared the Bid Form as required by the Instructions to Bidders.
 - 3. Indicated on the Bid Form the Addenda received.
 - 4. Attached to the Bid Form: Bid Supplement Form - Unit Prices.
 - 5. Attached to the Bid Form: Bid Bond OR a certified check for the amount required.
 - 6. Bid envelope shows name and address of the Bidder.
 - 7. Bid envelope shows name of Project being bid.
 - 8. Certification Regarding Lobbying (EPA Form 6600-06)
 - 9. If applicable, Disclosure of Lobbying Activities Form (EPA Form LLL)
 - 10. Good faith efforts in meeting fair share (WBE/MBE) objectives.
- C. The following items shall be provided prior to Contract Signing.
 - 1. Executed Performance Bond and Labor and Material Bond.
 - 2. Certificates of Insurance in the amounts indicated
 - 3. List of subcontractors who provided bids.
 - 4. DBE Subcontractor Utilization Form (MEDEP Form 6100-4)
 - 5. For each DBE subcontractor, a DBE Program Subcontractor Performance Form (MEDEP Form 6100-3)

END OF DOCUMENT 004393

DOCUMENT 005100 - NOTICE OF AWARD

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Bidder's Address: _____.
- C. Project Name: **Abatement and Demolition of the Former Forster Mill.**
- D. Project Location: **581 Depot Street, Wilton, Maine.**
- E. Owner: **Town of Wilton, 158 Weld Road, Wilton, Maine.**
- F. Engineer: **Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.**
- G. Engineer Project Number: **161.06104.**

1.2 NOTICE OF AWARD OF CONTRACT

- A. Notice: The above Bidder is hereby notified that their bid, dated **<Insert date>**, for the above Contract has been considered and the Bidder is hereby awarded a contract for **<Insert brief description of Work or sections of Work awarded>**.
- B. Contract Sum: The Contract Sum is **<Insert written amount>** dollars (\$**<Insert numeric amount>**).

1.3 EXECUTION OF CONTRACT

- A. Contract Documents: Copies of the Contract Documents will be made available to the Bidder immediately. The Bidder must comply with the following conditions precedent within 10 days of the above date of issuance of the Notice:
 - 1. Deliver to Owner three sets of fully executed copies of the Contract Documents.
 - 2. Deliver with the executed Contract Documents Bonds and Certificates of Insurance required by the Contract Documents.
- B. Compliance: Failure to comply with conditions of this Notice within the time specified will entitle Owner to consider the Bidder in default, annul this Notice, and declare the Bidder's Bid security forfeited.
 - 1. Within ten days after the Bidder complies with the conditions of this Notice, Owner will return to the Bidder one fully executed copy of the Contract Documents.

1.4 NOTIFICATION

A. This Notice is issued by:

1. Owner: Town of Wilton, Maine
2. Authorized Signature : _____(Handwritten signature).
3. Signed By : _____(Type or print name).
4. Title : _____

END OF DOCUMENT 005100

DOCUMENT 006000 - FORMS

1.1 FORM OF AGREEMENT AND GENERAL CONDITIONS

- A. The following form of Owner/Contractor Agreement and form of the General Conditions shall be used for Project:
 - 1. AIA Document A101, "Standard Form of Agreement between Owner and Contractor, Stipulated Sum."

1.2 ADMINISTRATIVE FORMS

- A. Copies of AIA standard forms may be obtained from the American Institute of Architects; <http://www.aia.org/contractdocs/purchase/index.htm>; docspurchases@aia.org; (800) 942-7732.
- B. The General Conditions for Project are AIA Document A201, "General Conditions of the Contract for Construction."
- C. Administrative Forms: Additional administrative forms are specified in Division 01 General Requirements.
- D. Preconstruction Forms:
 - 1. Form of Performance Bond and Labor and Material Bond: AIA Document A312, "Performance Bond and Payment Bond."
 - 2. Form of Certificate of Insurance: AIA Document G715, "Supplemental Attachment for ACORD Certificate of Insurance 25-S."
- E. Information and Modification Forms:
 - 1. Form for Requests for Information (RFIs): AIA Document G716, "Request for Information (RFI)."
 - 2. Form of Request for Proposal: AIA Document G709, "Work Changes Proposal Request."
 - 3. Change Order Form: AIA Document G701, "Change Order."
- F. Payment Forms:
 - 1. Payment Application: AIA Document G702/703, "Application and Certificate for Payment and Continuation Sheet."
 - 2. Form of Contractor's Affidavit: AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims" or EJCDC Pay Requisition Form. Incorporated by Reference.
 - 3. Form of Affidavit of Release of Liens: AIA Document G706A, "Contractor's Affidavit of Payment of Release of Liens."
 - 4. Form of Consent of Surety: AIA Document G707, "Consent of Surety to Final Payment."

END OF DOCUMENT 006000

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work under separate contracts.
4. Access to site.
5. Work restrictions.
6. Specification and Drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: **Abatement and Demolition of the Former Forster Mill.**

1. Project Location: **581 Depot Street, Wilton, Maine.**

B. Owner: **Town of Wilton, 158 Weld Road, Wilton, Maine.**

1. Owner's Representative: **Rhonda Irish, Town Manager, (207) 645-4961, manager@wiltonmaine.org.**

C. Engineer: **Ransom Consulting, Inc., 400 Commercial Street, Suite 404, Portland, Maine.**

1. Engineer's Representative: **Jaime Madore, P.E. (207) 772-2891, jaime.madore@ransomenv.com.**

D. Project Coordinator for Multiple Contracts: Jaime Madore (Ransom Consulting, Inc.) has been engaged by Owner to serve as Project coordinator.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. **Task 1: Asbestos Abatement.** Abatement of interior asbestos-containing building materials in the Site buildings in accordance with applicable local and state regulations.

- a. See Ransom's June 29, 2015 Hazardous Building Materials Survey, Rev. 1, attached to these project specifications (Section 003126) for information regarding asbestos quantities and locations.
 - b. It should be noted: universal and hazardous wastes referenced in this Hazardous Building Materials Survey have been previously removed from Site; asbestos containing building materials in the boiler room have been previously abated and removed from Site; and asbestos in roofing materials and window glazing will be abated during demolition as described in Tasks 2 through 5, described below.
 - c. Asbestos abatement must be performed in accordance with applicable regulations established by the United States Environmental Protection Agency, OSHA, and the State of Maine. ACM will be removed by a licensed asbestos abatement contractor and in accordance with a project design prepared by a certified Abatement Project Designer. See Section 028211 for details.
2. **Task 2: Demolition of the Former Forster Mill – Demo Section 1.** Demolition of the Main Manufacturing Building – Section 1 (as shown on the plans) in accordance with applicable local and state regulations (foundation/slab to remain). The Contractor shall provide documentation of proper transportation, recycling, and disposal of demolition byproducts.
 - a. All items associated with Task 1 (described above) must be completed prior to building demolition activities.
 - b. Contractor shall take provisions to manage the presence of lead based paint during demolition activities. Lead-based paint identified in the Site buildings will be abated in accordance with State and Federal regulations, including the OSHA lead standard (29 CFR 1926.62 "Lead Exposure in Construction: Interim Final Rule.") Contractor shall prepare a Site-specific health and safety plan before demolition activities which includes an exposure assessment, the required work procedures, and personal protective equipment to be used.
 - c. Contractor shall provide and maintain environmental and engineering controls to contain potentially hazardous dust and stormwater from impacting the public, site workers, or occupants of adjacent properties.
 - d. Construction wastes, including paint chips or lead painted items (windows, doors, trim, etc.) must be disposed as construction and demolition debris at an appropriate disposal facility. Metal components are not regulated if they will be recycled and not disposed of in a landfill. The Contractor shall provide documentation of proper transportation, recycling, and disposal of all demolition and byproducts (lead-painted or otherwise).
 - e. Task includes abatement of asbestos in roofing materials and asbestos in window glazing in accordance with applicable local and state regulations. See Section 003126 for information regarding asbestos quantities and locations and Section 028211 for information regarding management and disposal requirements for asbestos-containing building materials.
3. **Task 3: Demolition of the Former Forster Mill – Demo Section 2.** Demolition of the Main Manufacturing Building – Section 2 (as shown on the plans) in accordance with applicable local and state regulations (foundation/slab to remain). The Contractor shall provide documentation of proper transportation, recycling, and disposal of demolition byproducts.
 - a. All items associated with Task 1 (described above) must be completed prior to building demolition activities.

- b. Contractor shall take provisions to manage the presence of lead based paint during demolition activities. Lead-based paint identified in the Site buildings will be abated in accordance with State and Federal regulations, including the OSHA lead standard (29 CFR 1926.62 “Lead Exposure in Construction: Interim Final Rule.”) Contractor shall prepare a Site-specific health and safety plan before demolition activities which includes an exposure assessment, the required work procedures, and personal protective equipment to be used.
 - c. Contractor shall provide and maintain environmental and engineering controls to contain potentially hazardous dust and stormwater from impacting the public, site workers, or occupants of adjacent properties.
 - d. Construction wastes, including paint chips or lead painted items (windows, doors, trim, etc.) must be disposed as construction and demolition debris at an appropriate disposal facility. Metal components are not regulated if they will be recycled and not disposed of in a landfill. The Contractor shall provide documentation of proper transportation, recycling, and disposal of all demolition and byproducts (lead-painted or otherwise).
 - e. Task includes abatement of asbestos in roofing materials and asbestos in window glazing in accordance with applicable local and state regulations. See Section 003126 for information regarding asbestos quantities and locations and Section 028211 for information regarding management and disposal requirements for asbestos-containing building materials.
 - f. Task includes decommissioning of floor drains by filling with concrete.
4. **Task 4: Demolition of the Former Forster Mill – Demo Section 3.** Demolition of the Main Manufacturing Building – Section 3 (as shown on the plans) in accordance with applicable local and state regulations (demolition inclusive of foundation and slab materials). The Contractor shall provide documentation of proper transportation, recycling, and disposal of demolition byproducts.
- a. All items associated with Task 1 (described above) must be completed prior to building demolition activities.
 - b. Contractor shall take provisions to manage the presence of lead based paint during demolition activities. Lead-based paint identified in the Site buildings will be abated in accordance with State and Federal regulations, including the OSHA lead standard (29 CFR 1926.62 “Lead Exposure in Construction: Interim Final Rule.”) Contractor shall prepare a Site-specific health and safety plan before demolition activities which includes an exposure assessment, the required work procedures, and personal protective equipment to be used.
 - c. Contractor shall provide and maintain environmental and engineering controls to contain potentially hazardous dust and stormwater from impacting the public, site workers, or occupants of adjacent properties.
 - d. Construction wastes, including paint chips or lead painted items (windows, doors, trim, etc.) must be disposed as construction and demolition debris at an appropriate disposal facility. Metal components are not regulated if they will be recycled and not disposed of in a landfill. The Contractor shall provide documentation of proper transportation, recycling, and disposal of all demolition and byproducts (lead-painted or otherwise).
 - e. Task includes abatement of asbestos in roofing materials and asbestos in window glazing in accordance with applicable local and state regulations. See Section 003126 for information regarding asbestos quantities and locations and Section 028211 for information regarding management and disposal requirements for asbestos-containing building materials.

5. **Task 3: Demolition of the Former Forster Mill – Demo Section 4.** Demolition of the Main Manufacturing Building – Section 4 (as shown on the plans) in accordance with applicable local and state regulations (foundation/slab to remain). The Contractor shall provide documentation of proper transportation, recycling, and disposal of demolition byproducts.
- a. All items associated with Task 1 (described above) must be completed prior to building demolition activities.
 - b. Contractor shall take provisions to manage the presence of lead based paint during demolition activities. Lead-based paint identified in the Site buildings will be abated in accordance with State and Federal regulations, including the OSHA lead standard (29 CFR 1926.62 “Lead Exposure in Construction: Interim Final Rule.”) Contractor shall prepare a Site-specific health and safety plan before demolition activities which includes an exposure assessment, the required work procedures, and personal protective equipment to be used.
 - c. Contractor shall provide and maintain environmental and engineering controls to contain potentially hazardous dust and stormwater from impacting the public, site workers, or occupants of adjacent properties.
 - d. Construction wastes, including paint chips or lead painted items (windows, doors, trim, etc.) must be disposed as construction and demolition debris at an appropriate disposal facility. Metal components are not regulated if they will be recycled and not disposed of in a landfill. The Contractor shall provide documentation of proper transportation, recycling, and disposal of all demolition and byproducts (lead-painted or otherwise).
 - e. Task includes abatement of asbestos in roofing materials and asbestos in window glazing in accordance with applicable local and state regulations. See Section 003126 for information regarding asbestos quantities and locations and Section 028211 for information regarding management and disposal requirements for asbestos-containing building materials.
 - f. Task includes decommissioning of floor drains by filling with concrete.

1.4 ACCESS TO SITE

- A. General: (Each) Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. General: (Each) Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- C. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 1. Driveways, Walkways, and Entrances: Keep driveways 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 for storage of materials.

1.5 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, unless otherwise approved by Engineer and Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, which may be added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections, and in Part 3, below.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

1.4 INCIDENTAL ITEMS

- A. Incidental work items for which separate payment is not measured include, but are not limited to, the following items:
 - 1. Dust Control;
 - 2. Traffic Control;
 - 3. Decontamination of equipment, tools and personnel;
 - 4. Proper disposal of decontamination byproducts;
 - 5. Dewatering;
 - 6. Clean-up;
 - 7. Protection of structures to remain;
 - 8. Restoration (replacement in kind, or loaming, seeding and mulching) of areas where pavement was removed or damaged;

9. Seeding and raking of areas disturbed by non-project specific items (i.e. truck parking, storage of materials, stockpiles, etc.);
10. Restoration of property;
11. Utility crossings and relocations;
12. Maintenance of material stockpiles;
13. Minor items such as replacement of fences, mailboxes, guard rails, signs, rock walls, steps, etc.;
14. Project record drawings;
15. Trench excavation protection to meet applicable safety standards;
16. Utility coordination;
17. Salvaging material as noted, and transporting salvaged materials to designated location;
18. Maintenance of stormwater, potable water, and sanitary sewer flows;
19. Maintenance and safeguarding of utility poles during construction;
20. Shoring, bracing, support and protection of utilities as required;
21. Maintenance, protection and reestablishment of property pins and survey markers disturbed by the Contractor;
22. Protection of utilities;
23. Protection of trees to remain;
24. Development and submission of site specific Health and Safety Plan (HASP);
25. Temporary facilities including sanitary conveniences; and
26. Required project funding signage.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES – TASK 1

A. Unit Price No. 1: Asbestos Abatement

1. Description: All labor, equipment, tools and other materials required for the abatement, removal and disposal of all asbestos-containing building materials in the Main Manufacturing Building and Photo Shop in accordance with applicable rules and regulations, and for all other work and expense incidental thereto for which payment is not provided under other items. It should be noted that asbestos containing building materials in the boiler room have previously been abated and removed from Site. Additionally, asbestos-containing roofing materials, and asbestos identified in onsite window glazing shall be abated during building demolition (described in Tasks 2 through 5, below).
2. Related Sections: Section 003126 “Existing Hazardous Material Information,” Section 011000 “Summary,” Section 017419 “Construction Waste Management and Disposal,” and Section 024116 “Structure Demolition.”
3. Unit of Measurement: Per Lump Sum.
4. Anticipated Quantity: One

3.2 SCHEDULE OF UNIT PRICES – TASK 2

A. Unit Price No. 2: Demolition of the Former Forster Mill – Demo Section 1.

1. Description: All labor, equipment, tools and other materials required for the demolition of the Main Manufacturing Building – Section 1 (as shown on the plans); mobilization and demobilization; removal and disposal or salvage of all demolition debris and associated fees; removal and disposal of construction debris present on ground surface; disconnection and capping of utilities as necessary; management of lead-based paint coated materials in accordance with applicable regulations; for dust control; for erosion/sedimentation control and stormwater management; for ensuring structural stability of buildings to remain; and for all other work and expense incidental thereto for which payment is not provided under other items. This task shall also include abatement of asbestos containing materials in window glazing, and abatement of asbestos containing materials in roofing components which remain. It should be noted that no demolition of the building slab or foundation will be necessary; demolition activities will be completed to grade.
2. Related Sections: Section 003126 “Existing Hazardous Material Information,” Section 011000 “Summary,” Section 017419 “Construction Waste Management and Disposal,” and Section 024116 “Structure Demolition.”
3. Unit of Measurement: Per Lump Sum.
4. Anticipated Quantity: One

3.3 SCHEDULE OF UNIT PRICES – TASK 3

A. Unit Price No. 3: Demolition of the Former Forster Mill – Demo Section 2.

1. Description: All labor, equipment, tools and other materials required for the demolition of the Main Manufacturing Building – Section 2 (as shown on the plans); mobilization and demobilization; removal and disposal or salvage of all demolition debris and associated fees; disconnection and capping of utilities as necessary; management of lead-based paint coated materials in accordance with applicable regulations; for dust control; for erosion/sedimentation control and stormwater management; for ensuring structural stability of buildings to remain; and for all other work and expense incidental thereto for which payment is not provided under other items. This task shall also include abatement of asbestos containing materials in window glazing, and abatement of asbestos containing materials in roofing components. This task shall also include decommissioning of active floor drains by filling with concrete. It should be noted that no demolition of the building slab or foundation will be necessary; demolition activities will be completed to grade.
2. Related Sections: Section 003126 “Existing Hazardous Material Information,” Section 011000 “Summary,” Section 017419 “Construction Waste Management and Disposal,” and Section 024116 “Structure Demolition.”
3. Unit of Measurement: Per Lump Sum.
4. Anticipated Quantity: One

3.4 SCHEDULE OF UNIT PRICES – TASK 4

A. Unit Price No. 4: Demolition of the Former Forster Mill – Demo Section 3.

1. Description: All labor, equipment, tools and other materials required for the demolition of the Main Manufacturing Building – Section 3 (as shown on the plans, inclusive of Sawdust Shed, Photo Shed and Hydrant Shed); mobilization and demobilization; demolition of basements, foundations, and utilities; removal and disposal or salvage of all demolition debris and associated fees; disconnection and capping of utilities as necessary; management of lead-based paint coated materials in accordance with applicable regulations; backfilling of the foundation holes with common borrow or crushed demolition debris, and grading as needed; for dust control; for erosion/sedimentation control and stormwater management; for ensuring structural stability of buildings to remain; and for all other work and expense incidental thereto for which payment is not provided under other items. This task shall also include abatement of asbestos containing materials in window glazing, and abatement of asbestos containing materials in roofing components.
2. Related Sections: Section 003126 “Existing Hazardous Material Information,” Section 011000 “Summary,” Section 017419 “Construction Waste Management and Disposal,” and Section 024116 “Structure Demolition.”
3. Unit of Measurement: Per Lump Sum.
4. Anticipated Quantity: One

3.5 SCHEDULE OF UNIT PRICES – TASK 5

A. Unit Price No. 5: Demolition of the Former Forster Mill – Demo Section 4.

1. Description: All labor, equipment, tools and other materials required for the demolition of the Main Manufacturing Building – Section 4 (as shown on the plans); mobilization and demobilization; removal and disposal or salvage of all demolition debris and associated fees; disconnection and capping of utilities as necessary; management of lead-based paint coated materials in accordance with applicable regulations; for dust control; for erosion/sedimentation control and stormwater management; for ensuring structural stability of buildings to remain; and for all other work and expense incidental thereto for which payment is not provided under other items. This task shall also include abatement of asbestos containing materials in window glazing, and abatement of asbestos containing materials in roofing components. This task shall also include decommissioning of active floor drains by filling with concrete. It should be noted that no demolition of the building slab or foundation will be necessary; demolition activities will be completed to grade.
2. Related Sections: Section 003126 “Existing Hazardous Material Information,” Section 011000 “Summary,” Section 017419 “Construction Waste Management and Disposal,” and Section 024116 “Structure Demolition.”
3. Unit of Measurement: Per Lump Sum.
4. Anticipated Quantity: One

END OF SECTION 012200

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 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 in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. 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, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated, where applicable or requested.

- g. 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.
 - h. Cost information, including a proposal of change, if any, in the Contract Sum.
 - i. 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.
 - j. 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.
2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within fifteen days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order.
 - b. Use product specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

1.4 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.

1.5 PROCEDURES

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

1.6 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer 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: Engineer will consider requests for substitution if received within 14 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.
 - j. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on in writing to the Contractor.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Engineer 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. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request, 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 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 before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Engineer.
 - 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 before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Engineer will issue a Change Order for signatures of Owner and Contractor on AIA Document G701, or similar form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Engineer by the 15th day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
 - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Engineer.
- D. Application for Payment Forms: Use AIA Document G702/AIA Document G703, or EJCDC Document C-620 as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer 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 for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 - 3. Include amounts of Change Orders issued before last day of construction period covered by application.
 - 4. Certified Payrolls (Davis-Bacon)
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Engineer by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Contractor's construction schedule (preliminary if not final).
 3. Products list (preliminary if not final).
 4. Schedule of unit prices.
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal subconsultants.
 8. Copies of building permits.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Certificates of insurance and insurance policies.
 12. Performance and payment bonds.
- H. Application for Payment at Substantial Completion: After Engineer issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
- I. Final Payment Application: After completing Project closeout requirements, 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 taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, incorporated by reference.
 5. AIA Document G706A, incorporated by reference.
 6. AIA Document G707, incorporated by reference.
 7. Evidence that claims have been settled, if applicable.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. RFIs.
 - 3. Digital project management procedures.
 - 4. Project meetings.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

- A. RFI: Request for Information. Request from Contractor seeking information required by or clarifications of the Contract Documents.

1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

- 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 to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with scheduled 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. Installation and removal of temporary facilities and controls.
 3. Delivery and processing of submittals.
 4. Progress meetings.
 5. Project closeout activities.
 6. Startup and adjustment of systems.

1.5 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Engineer will return without response those RFIs submitted to Engineer by other entities controlled by Contractor.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Engineer.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: AIA Document G716 or software-generated form with substantially the same content as indicated above, acceptable to Engineer.

- D. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow seven working days for Engineer's response for each RFI. RFIs received by Engineer after 1:00 p.m. will be considered as received the following working day.
1. Engineer's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt by Engineer of additional information.
 2. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within ten days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly, or as requested. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Engineer.
 4. RFI number including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Engineer's response was received.
- F. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.

1.6 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Engineer's Digital Data Files: Digital data files of Engineer's CAD drawings will be provided by Engineer for Contractor's use during construction.
1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
 2. Engineer makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
 3. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Engineer. Provide data in locked format to prevent further changes.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Engineer, prepare as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.

3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.7 PROJECT MEETINGS

- A. General: Engineer will schedule and conduct meetings and conferences at Project site unless otherwise indicated.
- B. Preconstruction Conference: Engineer will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than 15 days after Notice of Award.
 1. Attendees: Authorized representatives of Owner, Engineer; Contractor(s) and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. 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. Responsibilities and personnel assignments.
 - b. Tentative construction schedule.
 - c. Phasing.
 - d. Critical work sequencing and long lead items.
 - e. Designation of key personnel and their duties.
 - f. Lines of communications.
 - g. Procedures for processing field decisions and Change Orders.
 - h. Procedures for RFIs.
 - i. Procedures for testing and inspecting.
 - j. Procedures for processing Applications for Payment.
 - k. Distribution of the Contract Documents.
 - l. Submittal procedures.
 - m. Preparation of Record Documents.
 - n. Use of the premises.
 - o. Work restrictions.
 - p. Working hours.
 - q. Responsibility for temporary facilities and controls.
 - r. Construction waste management and recycling.
 - s. Parking availability.
 - t. Office, work, and storage areas.
 - u. Equipment deliveries and priorities.
 - v. First aid.
 - w. Security.
 - x. Progress cleaning.
 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Progress Meetings: Engineer will conduct progress meetings at monthly intervals.
 1. Coordinate dates of meetings with preparation of payment requests.

2. Attendees: In addition to representatives of Owner and Engineer, 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 meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. 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. Review present and future needs of each entity present, including the following:
 - 1) Sequence of operations.
 - 2) Status of submittals.
 - 3) Access.
 - 4) Site use.
 - 5) Temporary facilities and controls.
 - 6) Progress cleaning.
 - 7) Quality and work standards.
 - 8) Status of correction of deficient items.
 - 9) Field observations.
 - 10) Status of RFIs.
 - 11) Status of Proposal Requests.
 - 12) Pending changes.
 - 13) Status of Change Orders.
 - 14) Pending claims and disputes.
 - 15) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - 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 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Construction schedule updating reports.
 - 3. Weekly construction reports.
 - 4. Site condition reports.
- B. Related Requirements:
 - 1. Section 011200 "Multiple Contract Summary" for preparing a combined Contractor's Construction Schedule.

1.2 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 Activity: An activity on the critical path that 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. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Event: The starting or ending point of an activity.
- D. 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.

1.3 SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF file.
 - 3. Two paper copies, of sufficient size to display entire period or schedule, as required.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- C. Construction Schedule Updating Reports: Submit with Applications for Payment.
- D. Weekly Construction Reports: Submit at monthly intervals.
- E. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

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

1.5 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- 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 floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Procurement Activities: Include procurement process activities for the following 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.

2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
 3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.
 4. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final 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. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 3. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Provisions for future construction.
 - c. Seasonal variations.
 - d. Environmental control.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and the Contract Time.
- G. 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 final completion percentage for each activity.
- H. Recovery Schedule: When periodic update indicates the Work is two weeks or more behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.

- I. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate contractors, 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.

1.6 REPORTS

- A. Weekly Construction Reports: Prepare a weekly construction report recording the following information concerning events at Project site:
 1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Testing and inspection.
 8. Accidents.
 9. Meetings and significant decisions.
 10. Stoppages, delays, shortages, and losses.
 11. Emergency procedures.
 12. Orders and requests of authorities having jurisdiction.
 13. Change Orders received and implemented.
 14. Change Directives received and implemented.
 15. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

1.2 DEFINITIONS

- A. Informational Submittals: Written and graphic information and physical samples that do not require Engineer'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."

1.3 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Engineer.
4. Name of Contractor.
5. Name of firm or entity that prepared submittal.
6. Names of subcontractor, manufacturer, and supplier.
7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
8. Category and type of submittal.
9. Submittal purpose and description.
10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
11. Drawing number and detail references, as appropriate.
12. Indication of full or partial submittal.

13. Location(s) where product is to be installed, as appropriate.
 14. Other necessary identification.
 15. Remarks.
 16. Signature of transmitter.
- B. Options: Identify options requiring selection by Engineer.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Engineer on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Paper Submittals:
1. Place a permanent label or title block on each submittal item for identification; include name of firm or entity that prepared submittal.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.
 3. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Engineer will not return copies.
 4. Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using AIA Document G810 or similar transmittal form.
- E. PDF Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

1.5 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Email: Prepare submittals as PDF package, and transmit to Engineer by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Engineer.
 2. Paper: Prepare submittals in paper form, and deliver to Engineer.
- 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 unless partial submittals for portions of the Work are indicated on approved submittal schedule.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer'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 two weeks for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Resubmittal Review: Allow two weeks for review of each resubmittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- E. 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.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final submittals that are marked with approval notation from Engineer's action stamp.

1.6 SUBMITTAL REQUIREMENTS

- A. 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 unsuitable 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. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. 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. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.

2. Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
- C. 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:
- D. 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 Engineers and owners, and other information specified.
- E. Certificates:
1. Certificates and Certifications Submittals: Submit 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. Provide a notarized signature where indicated.
 2. 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.
 3. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
 4. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- F. Test and Research Reports:
1. 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.
 2. 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.
 3. 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.
 4. 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.
 5. 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.
 6. 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:
 - a. Name of evaluation organization.

- b. Date of evaluation.
- c. Time period when report is in effect.
- d. Product and manufacturers' names.
- e. Description of product.
- f. Test procedures and results.
- g. Limitations of use.

1.7 CONTRACTOR'S REVIEW

- A. 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. Mark with approval stamp before submitting to Engineer.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include 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.
 - 1. Engineer will not review submittals received from Contractor that do not have Contractor's review and approval.

1.8 ENGINEER'S REVIEW

- A. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- B. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Engineer.
- C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- D. Engineer will discard submittals received from sources other than Contractor.
- E. Submittals not required by the Contract Documents will be returned by Engineer without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection 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. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. 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, assembly, and similar operations.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. 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.
- I. 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. Contractor's quality-control services do not include contract administration activities performed by Engineer.

1.3 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Engineer for direction 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 Engineer for a decision before proceeding.

1.4 INFORMATIONAL SUBMITTALS

- A. Testing Agency Qualifications: 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. Permits, Licenses, and Certificates: For Owner's record, 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.

1.5 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, telephone number, and email address 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 inspection.
 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 reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Statement on condition of substrates and their acceptability for installation of product.
 2. Statement that products at Project site comply with requirements.
 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 5. Other required items indicated in individual Specification Sections.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. 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. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. 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.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, 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.
- 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 product that are similar in material, design, and extent to those indicated for this Project.

- F. Specialists: Certain Specification Sections 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. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

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 inspection they are engaged to perform.
 - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
 - 1. Engage a qualified testing agency to perform 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 inspection 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 inspection 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. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

- D. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the locations 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 duties of Contractor.
- E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: 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 Engineer.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Engineer's reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as

possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

- 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

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 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": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- 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.

1.2 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.

1.3 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 Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."
- 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.
1. AABC - Associated Air Balance Council; www.aabc.com.
 2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
 3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
 4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
 5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
 6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
 7. ABMA - American Boiler Manufacturers Association; www.abma.com.
 8. ACI - American Concrete Institute; (Formerly: ACI International); www.abma.com.
 9. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
 10. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
 11. AF&PA - American Forest & Paper Association; www.afandpa.org.
 12. AGA - American Gas Association; www.aga.org.
 13. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
 14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
 15. AI - Asphalt Institute; www.asphaltinstitute.org.
 16. AIA - American Institute of Architects (The); www.aia.org.
 17. AISC - American Institute of Steel Construction; www.aisc.org.
 18. AISI - American Iron and Steel Institute; <http://www.steel.org>.
 19. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
 20. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
 21. ANSI - American National Standards Institute; www.ansi.org.
 22. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
 23. APA - APA - The Engineered Wood Association; www.apawood.org.
 24. APA - Architectural Precast Association; www.archprecast.org.
 25. API - American Petroleum Institute; www.api.org.
 26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
 27. ARI - American Refrigeration Institute; (See AHRI).
 28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
 29. ASCE - American Society of Civil Engineers; www.asce.org.
 30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).

31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
32. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
33. ASSE - American Society of Safety Engineers (The); www.asse.org.
34. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
35. ASTM - ASTM International; www.astm.org.
36. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
37. AWEA - American Wind Energy Association; www.awea.org.
38. AWI - Architectural Woodwork Institute; www.awinet.org.
39. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
40. AWWPA - American Wood Protection Association; www.awpa.com.
41. AWS - American Welding Society; www.aws.org.
42. AWWA - American Water Works Association; www.awwa.org.
43. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
44. BIA - Brick Industry Association (The); www.gobrick.com.
45. BICSI - BICSI, Inc.; www.bicsi.org.
46. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
47. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
48. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
49. CDA - Copper Development Association; www.copper.org.
50. CEA - Canadian Electricity Association; www.electricity.ca.
51. CEA - Consumer Electronics Association; www.ce.org.
52. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
53. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
54. CGA - Compressed Gas Association; www.cganet.com.
55. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
56. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
57. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
58. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
59. CPA - Composite Panel Association; www.pbmdf.com.
60. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
61. CRRC - Cool Roof Rating Council; www.coolroofs.org.
62. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
63. CSA - Canadian Standards Association; www.csa.ca.
64. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csa-international.org.
65. CSI - Construction Specifications Institute (The); www.csinet.org.
66. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
67. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
68. CWC - Composite Wood Council; (See CPA).
69. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
70. DHI - Door and Hardware Institute; www.dhi.org.
71. ECA - Electronic Components Association; (See ECIA).
72. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
73. ECIA - Electronic Components Industry Association; www.eciaonline.org.
74. EIA - Electronic Industries Alliance; (See TIA).

75. EIMA - EIFS Industry Members Association; www.eima.com.
76. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
77. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
78. ESTA - Entertainment Services and Technology Association; (See PLASA).
79. EVO - Efficiency Valuation Organization; www.evo-world.org.
80. FCI - Fluid Controls Institute; www.fluidcontrolsintitute.org.
81. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
82. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
83. FM Approvals - FM Approvals LLC; www.fmglobal.com.
84. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
85. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridarooft.com.
86. FSA - Fluid Sealing Association; www.fluidsealing.com.
87. FSC - Forest Stewardship Council U.S.; www.fscus.org.
88. GA - Gypsum Association; www.gypsum.org.
89. GANA - Glass Association of North America; www.glasswebsite.com.
90. GS - Green Seal; www.greenseal.org.
91. HI - Hydraulic Institute; www.pumps.org.
92. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
93. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
94. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
95. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
96. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
97. IAS - International Accreditation Service; www.iasonline.org.
98. IAS - International Approval Services; (See CSA).
99. ICBO - International Conference of Building Officials; (See ICC).
100. ICC - International Code Council; www.iccsafe.org.
101. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
102. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
103. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
104. IEC - International Electrotechnical Commission; www.iec.ch.
105. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
106. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
107. IESNA - Illuminating Engineering Society of North America; (See IES).
108. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
109. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
110. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
111. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
112. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
113. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
114. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
115. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
116. ISO - International Organization for Standardization; www.iso.org.

117. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
118. ITU - International Telecommunication Union; www.itu.int/home.
119. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
120. LMA - Laminating Materials Association; (See CPA).
121. LPI - Lightning Protection Institute; www.lightning.org.
122. MBMA - Metal Building Manufacturers Association; www.mbma.com.
123. MCA - Metal Construction Association; www.metalconstruction.org.
124. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
125. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
126. MHIA - Material Handling Industry of America; www.mhia.org.
127. MIA - Marble Institute of America; www.mhia.org.
128. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
129. MPI - Master Painters Institute; www.paintinfo.com.
130. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
131. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
132. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
133. NADCA - National Air Duct Cleaners Association; www.nadca.com.
134. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
135. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
136. NBI - New Buildings Institute; www.newbuildings.org.
137. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
138. NCMA - National Concrete Masonry Association; www.ncma.org.
139. NEBB - National Environmental Balancing Bureau; www.nebb.org.
140. NECA - National Electrical Contractors Association; www.necanet.org.
141. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
142. NEMA - National Electrical Manufacturers Association; www.nema.org.
143. NETA - InterNational Electrical Testing Association; www.netaworld.org.
144. NFHS - National Federation of State High School Associations; www.nfhs.org.
145. NFPA - National Fire Protection Association; www.nfpa.org.
146. NFPA - NFPA International; (See NFPA).
147. NFRC - National Fenestration Rating Council; www.nfrc.org.
148. NHLA - National Hardwood Lumber Association; www.nhla.com.
149. NLGA - National Lumber Grades Authority; www.nlga.org.
150. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
151. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
152. NRCA - National Roofing Contractors Association; www.nrca.net.
153. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
154. NSF - NSF International; www.nsf.org.
155. NSPE - National Society of Professional Engineers; www.nspe.org.
156. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
157. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
158. NWFA - National Wood Flooring Association; www.nwfa.org.
159. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
160. PDI - Plumbing & Drainage Institute; www.pdionline.org.
161. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
162. RCSC - Research Council on Structural Connections; www.boltcouncil.org.

163. RFCI - Resilient Floor Covering Institute; www.rfci.com.
164. RIS - Redwood Inspection Service; www.redwoodinspection.com.
165. SAE - SAE International; www.sae.org.
166. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
167. SDI - Steel Deck Institute; www.sdi.org.
168. SDI - Steel Door Institute; www.steeldoor.org.
169. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
170. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
171. SIA - Security Industry Association; www.siaonline.org.
172. SJI - Steel Joist Institute; www.steeljoist.org.
173. SMA - Screen Manufacturers Association; www.smainfo.org.
174. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
175. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
176. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
177. SPIB - Southern Pine Inspection Bureau; www.spib.org.
178. SPRI - Single Ply Roofing Industry; www.spri.org.
179. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
180. SSINA - Specialty Steel Industry of North America; www.ssina.com.
181. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
182. STI - Steel Tank Institute; www.steeltank.com.
183. SWI - Steel Window Institute; www.steelwindows.com.
184. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
185. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
186. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
187. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
188. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
189. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
190. TMS - The Masonry Society; www.masonrysociety.org.
191. TPI - Truss Plate Institute; www.tpinst.org.
192. TPI - Turfgrass Producers International; www.turfgrasssod.org.
193. TRI - Tile Roofing Institute; www.tilerroofing.org.
194. UL - Underwriters Laboratories Inc.; www.ul.com.
195. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
196. USAV - USA Volleyball; www.usavolleyball.org.
197. USGBC - U.S. Green Building Council; www.usgbc.org.
198. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
199. WASTEC - Waste Equipment Technology Association; www.wastec.org.
200. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
201. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
202. WDMA - Window & Door Manufacturers Association; www.wdma.com.
203. WI - Woodwork Institute; www.wicnet.org.
204. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
205. WWPA - Western Wood Products Association; www.wwpa.org.

- 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.
1. DIN - Deutsches Institut fur Normung e.V.; www.din.de.
 2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
 3. ICC - International Code Council; www.iccsafe.org.
 4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.
- 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.
1. COE - Army Corps of Engineers; www.usace.army.mil.
 2. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
 3. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
 4. DOD - Department of Defense; www.quicksearch.dla.mil.
 5. DOE - Department of Energy; www.energy.gov.
 6. EPA - Environmental Protection Agency; www.epa.gov.
 7. FAA - Federal Aviation Administration; www.faa.gov.
 8. FG - Federal Government Publications; www.gpo.gov/fdsys.
 9. GSA - General Services Administration; www.gsa.gov.
 10. HUD - Department of Housing and Urban Development; www.hud.gov.
 11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov.
 12. OSHA - Occupational Safety & Health Administration; www.osha.gov.
 13. SD - Department of State; www.state.gov.
 14. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.
 15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
 16. USDA - Department of Agriculture; Rural Utilities Service; www.usda.gov.
 17. USDOJ - Department of Justice; Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov.
 18. USP - U.S. Pharmacopeial Convention; www.usp.org.
 19. USPS - United States Postal Service; www.usps.com.
- 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.
1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
 2. DOD - Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.quicksearch.dla.mil.
 3. DSCC - Defense Supply Center Columbus; (See FS).
 4. FED-STD - Federal Standard; (See FS).
 5. FS - Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.

- a. Available from Defense Standardization Program; www.dsp.dla.mil.
 - b. Available from General Services Administration; www.gsa.gov.
 - c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.
 6. MILSPEC - Military Specification and Standards; (See DOD).
 7. USAB - United States Access Board; www.access-board.gov.
 8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).
- 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.
1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
 2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
 3. CDHS; California Department of Health Services; (See CDPH).
 4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org.
 5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
 6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
 7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development; www.txforests-service.tamu.edu.

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 SUMMARY

- A. The Contractor shall furnish all labor, equipment, and materials required for completion of the contract, and for protection of the Owner's employees and property during and as the result of work tasks under this Contract. Protection requires consideration of, at a minimum, dust, noise and hazardous and solid waste management.
- B. To prevent environmental pollution and to provide for environmental protection arising from construction activities related to the performance of this Contract, the Contractor and its subcontractor(s) shall comply with applicable federal, state, and local laws and regulations concerning environmental protection, as well as the specific requirements stated in this Section and elsewhere in the Specifications.

1.2 SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Project Identification and Temporary Construction Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. The Contractor shall furnish for himself such temporary office and storage facilities as he may require for his own uses and shall obtain all necessary applicable permits and/or approvals required for their use. Such facilities shall be located where directed by the Engineer and shall be completely removed at the completion of work.
- B. Sanitary Conveniences: Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers, in such manner, and at locations acceptable to the Engineer. The contents shall be removed and disposed of in a manner, and at a frequency acceptable to the public health agency having jurisdiction. The proper maintenance of sanitary convenience shall be the obligation and responsibility of the Contractor until the completion of the work.
- C. Project Sign: Project Sign to be erected prior to start of construction. Template attached to this Specification Section.

- D. Appropriate Davis Bacon, WBE/MBE and OSHA notifications and posters shall be displayed as necessary.
- E. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

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 by progress of the Work. Final locations to be approved by the Engineer.
- B. Provide each facility ready for use when needed to avoid delay. 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. General: Install temporary service or connect to existing service. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations. Install electric power service as indicated by the authorities having jurisdiction.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- G. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

3.3 TEMPORARY UTILITY USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to Engineer, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service: Use of potable water and municipal sewer services shall be arranged by the Contractor. Connection, metering, and payment procedures shall be in accordance with utility requirements. Contractor shall provide connections and extensions of services as required for construction operations, under oversight from the utility, and at no additional cost to the project.
- C. Electric Power Service: Electric power connection, metering, and payment procedures shall be in accordance with utility requirements. Contractor shall provide connections and extensions of services as required for construction operations, under oversight from the utility, and at no additional cost to the project. Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

3.4 SUPPORT FACILITIES INSTALLATION

- A. General: Provide construction for temporary offices, shops, and sheds located within construction area. Maintain support facilities until Engineer schedules Substantial Completion inspection. Remove before Substantial Completion.
- B. Temporary Roads and Construction Entrances: Construct and maintain temporary roads adequate for construction operations. Locate temporary roads and construction entrances as within construction limits indicated on Drawings. Provide dust-control treatment that is non-polluting and non-tracking. Reapply treatment as required to minimize dust.
- C. Traffic Controls: Comply with requirements of authorities having jurisdiction. Protect existing site improvements to remain including curbs, pavement, and utilities. Maintain access for fire-fighting equipment and access to fire hydrants.
- D. Parking: Provide temporary parking areas for construction personnel.
- E. Snow and Ice Removal: Remove snow and ice as required to minimize accumulations.
- F. Waste Disposal Facilities:
 - 1. The Contractor shall dispose of all discarded debris, from any source whatsoever, in a manner approved by the Engineer and Owner. Provide waste-collection containers in sizes adequate to handle waste from construction operations.
 - 2. Collect waste materials, debris, and rubbish daily.
 - 3. The Contractor shall keep each work area free and clear of clutter that could create a potential hazard to people working in or traveling through the area.
 - 4. The Contractor shall frequently remove materials no longer required on the Site, such as temporary structures, discarded containment materials, and similar materials and equipment, so that at all times the Site, access routes to the Site, and any other areas disturbed by his operations shall present a neat, orderly, workmanlike appearance.
 - 5. Comply with requirements of authorities having jurisdiction.

- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 2. 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.
 3. Maintain and touch up signs so they are legible at all times.
- H. Material Storage: The location of areas for storage of the Contractor's materials required temporarily in the performance of the work shall be within or adjacent to work area and shall require approval of the Owner prior to use.
- I. Noise Control: The Contractor shall use every effort and means possible to minimize or eliminate noise caused by its operation which the Engineer may consider objectionable. The Contractor shall provide working machinery, designed to operate with the least possible noise. The Owner may require activities that generate noise at levels of 85 decibels or above to be conducted outside of regular working hours so as not to pose a hazard to employees.
- J. Dust Control: OSHA begins enforcement of the Respirable Crystalline Silica Standard for construction on September 23, 2017. Contractor must comply with requirements outlined in this standard during construction, including the use of engineering controls (such as water or ventilation) to limit worker exposure to silica dust; providing respirators if necessary; limiting worker access to high silica dust exposure areas. Contractor shall provide proof of compliance with the Silica Standard prior to start of construction, and shall make efforts to maintain a "zero-dust" environment during all phases of construction.
- K. Decontamination: Provide and maintain a personal decontamination station to allow for removal of dust and other materials from clothing and protective equipment prior to leaving the work area(s).
- L. During the course of the work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away surplus lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

3.5 SECURITY AND PROTECTION OF INFRASTRUCTURE

- A. The Contractor shall be responsible for the preservation of Owner's property, and shall use every precaution necessary to prevent damage thereto. If direct or indirect damage is done to public or private property by or on account of any act, commission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Owner.
- B. The Contractor shall assume full responsibility for the protection of remaining building materials, ground, and utilities located outside of the Project, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect such structures and utilities

from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense.

- C. Protection of Existing Facilities: Protect existing 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.
- D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- E. Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings, and requirements of EPA Construction General Permit or authorities having jurisdiction.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- F. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- G. Dust control: Comply with requirements of authorities having jurisdiction. Prevent potentially-contaminated dust from leaving the project work area. Apply water by approved methods and with equipment including a tank with gauge equipped pressure pump and a nozzle-equipped spray bar.
- H. Security Lockup: Lock entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday and at all time the Contractor is off-site.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.6 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. Maintenance: Maintain facilities in good operating condition until removal. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- 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.

END OF SECTION 015000

CONSTRUCTION SIGN TEMPLATE

ABATEMENT AND DEMOLITION OF THE FORMER FORSTER MILL

Financing: United States Environmental Protection Agency Brownfields Cleanup Grant and
Maine Department of Economic and Community Development Loan



AmyJean McKeown
(617) 918-1248

Owner: Town of Wilton, Maine
Engineer: Ransom Consulting, Inc.
Contractor:
Total Project Cost:



Jaime Madore
(207) 772-2891



Tracy Kelly
(207) 446-3086

Town of Wilton, Maine

Rhonda Irish
(207) 645-4961



Andrea Smith
(207) 624-9800

THESE INSTITUTIONS ARE EQUAL OPPORTUNITY PROVIDERS

USEPA LOGO

Lettering, Circle, Top of
Center Circle (Dark Blue)
Background (White)
Leaves and Middle of Center
Circle (Light Green)
Bottom of Center Circle (Dark
Green)

MEDEP LOGO

Lettering (Black)
Sky (Light Blue)
Birds (White)
Mountains (Dark Green)
Grass (Light Green)
Water (Dark Blue)

TOWN OF WILTON
Text (Dark Blue)

RANSOM LOGO

"Ransom" (Dark Blue)
"Consulting Engineers and
Scientists" (Light Blue)
Background (White)

DECD LOGO

Lettering and Waves
(Dark Blue)
Waves (Light Brown)
Background (White)

GENERAL SIGN

Lettering (Black)
Background (White)

MINIMUM SIGN DIMENSIONS: 1200 x 2400 x 19 MM (4' x 8' x 3/4")

EXTERIOR PLYWOOD (A-B GRADE)

MINIMUM LETTERING SIZE: 5 CM (2-INCHES)

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. 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; and comparable products.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for requests for substitutions.

1.2 DEFINITIONS

- A. Products: Items obtained 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. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved by Engineer through submittal process 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.

1.3 SUBMITTALS

- A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 - 2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within seven days of receipt of a comparable product request. Engineer will notify Contractor of approval or rejection of proposed comparable product request within two weeks of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Form of Engineer's Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
 - b. Use product specified if Engineer does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. 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 determine compliance with the Contract Documents and to determine 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. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.

1.5 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: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories 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 meeting requirements of the Contract Documents.
 4. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 2. Evidence that proposed product provides specified warranty.
 3. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
 4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering.
 - 3. Installation of the Work.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.

1.2 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Engineer for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities, as necessary.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner and Engineer that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Engineer according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- C. Benchmarks: Establish and maintain a minimum of four permanent benchmarks on Project site (one per parcel, or as needed), referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- E. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.
- F. Remove and replace damaged, defective, or non-conforming Work.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
 - C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
 - E. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls," and Section 017419 "Construction Waste Management and Disposal."
 - F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
 - G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
 - H. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. 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 Requirements:
 - 1. Section 003126 "Existing Hazardous Material Information" for information on the hazardous building materials present in onsite buildings.
 - 2. Section 024116 "Structure Demolition" for disposition of waste resulting from demolition of buildings, structures, and site improvements, and for disposition of hazardous waste.
 - 3. Section 311000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.2 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 and site improvement 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.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Maximize amount of salvage/recycling of total non-hazardous solid waste generated by the Work.

1.4 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within two weeks of date established for the Notice to Proceed.

1.5 SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged/recycled, both estimated and actual in tons.
 - 5. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and/or construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.
- C. 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 when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. 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 Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, and environmental protection.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Sale and Donation: Not permitted, unless approved by Engineer and Owner.
- B. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Store items in a secure area until delivery to Owner.
3. Transport items to Owner's storage area.
4. Protect items from damage during transport and storage.

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 according to approved construction waste management plan.
 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 from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphalt Paving: Grind and/or transport asphalt as required by the receiving facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 1. Pulverize concrete as required by the receiving facility.
- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 1. Pulverize masonry as required by the receiving facility.
 2. Clean and stack undamaged, whole masonry units on wood pallets.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- E. Metals: Separate metals by type.
 1. Structural Steel: Stack members according to size, type of member, and length.
 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

- F. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- G. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- H. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.
- I. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- J. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 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.

B. Wood Materials:

- 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
- 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

- 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 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: Remove waste materials from Owner's property and legally dispose of them.

3.7 ASBESTOS ABATEMENT

- A. See Section 028211.

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. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.2 SUBMITTALS

- A. Contractor's List of Incomplete Items: submittal at Substantial Completion.
- B. Certified List of Incomplete Items: submittal at Final Completion.
- C. Certificates of Release: From authorities having jurisdiction.
- D. Certificate of Insurance: For continuing coverage.

1.3 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 two weeks prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. 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.
 - 2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of two weeks 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. Advise Owner of changeover in utility services.
 3. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 5. Complete final cleaning 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, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer 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 Engineer, that must be completed or corrected before certificate will be issued.

1.4 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 according to Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. Certified copy of the list shall 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.
- 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, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer 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.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- 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.

1.6 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Engineer 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. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. 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 Engineer.

PART 2 - PRODUCTS – NOT USED

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 for final cleaning.
 - 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, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls" and Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations, before requesting inspection for determination of Substantial Completion.
- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired.

Restore damaged construction and permanent facilities used during construction to specified condition.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up record prints.
 - 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit one paper-copy sets of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and file prints.
 - 3) Submit record digital data files and plots.
 - 4) Engineer will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit one paper-copy set of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and prints.
 - 3) Print each drawing, whether or not changes and additional information were recorded.
 - c. Final Submittal:
 - 1) Submit one paper-copy set(s) of marked-up record prints.
 - 2) Submit record digital data files and record digital data file plots.
 - 3) Plot each drawing file, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

1.3 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Cross-reference record prints to corresponding photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Changes made following Engineer's written orders.
 - d. Details not on the original Contract Drawings.
 - e. Field records for variable and concealed conditions.
 - f. Record information on the Work that is shown only schematically.
 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Engineer. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings or annotated PDF electronic file.
 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 3. Refer instances of uncertainty to Engineer for resolution.
 4. Engineer will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.
 - a. See Section 013100 "Project Management and Coordination" for requirements related to use of Engineer's digital data files.
 - b. Engineer will provide data file layer information. Record markups in separate layers.

- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Format: Annotated PDF electronic file.
 - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Engineer.
 - e. Name of Contractor.

1.4 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Note related Change Orders and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file.

1.5 MAINTENANCE OF RECORD DOCUMENTS

- A. Maintenance of Record Documents: Store record documents in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Engineer's reference during normal working hours.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 017839

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of buildings and site improvements.
2. Removing below-grade construction.
3. Disconnecting, capping or sealing, and removing site utilities.
4. Salvaging items for reuse by Owner.

1.2 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, signs, 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.

1.3 SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control, and for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of building demolition activities with starting and ending dates for each activity.
- C. Predemolition photographs or video.

1.4 CLOSEOUT SUBMITTALS

- A. Inventory of items that have been removed and salvaged.

1.5 FIELD CONDITIONS

- A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

- C. Hazardous Materials: Hazardous materials are present in onsite buildings. See Ransom's Hazardous Materials Inventory, attached to this specification package. Asbestos and lead-based paint must be abated in accordance with local, state and federal requirement prior to demolition of buildings. Universal and hazardous waste has already been removed from the Site buildings.
 - 1. Hazardous materials must be removed before start of the Work.
 - 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner.
 - 3. See Section 017419 "Construction Waste Management and Disposal" for information on hazardous material abatement, transportation and disposal.
- D. On-site storage or sale of removed items or materials is not permitted without Engineer and Owner approval.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Inventory and record the condition of items to be removed and salvaged.

3.2 PREPARATION

- A. Salvaged Items: Comply with the following:
 - 1. Clean salvaged items of dirt and demolition debris.
 - 2. Store items in a secure area until delivery to Owner.
 - 3. Transport items to storage area designated by Owner.
 - 4. Protect items from damage during transport and storage.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Utilities to be Disconnected: Locate, identify, disconnect, and seal or cap off utilities serving buildings and structures to be demolished.

1. Arrange to shut off utilities with utility companies.
2. If necessary, cut off pipe or conduit a minimum of 24 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
3. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.4 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, loading docks, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
- C. Existing Utilities to Remain: Maintain utility services to remain and protect from damage during demolition operations. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
- D. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Section 015000 "Temporary Facilities and Controls."
 1. Protect adjacent buildings and facilities from damage due to demolition activities.
 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings.
 5. Provide protection to ensure safe passage of people around building demolition area.
- E. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.5 DEMOLITION

- A. General: Demolish indicated buildings and site improvements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 2. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
 3. Maintain adequate ventilation when using cutting torches.
 4. Locate building 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 building 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.
- C. Explosives: Use of explosives is not permitted.
- D. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- E. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- F. Remove below-grade construction, including basements, foundation walls, and footings, completely.
- G. Existing Utilities: Demolish existing utilities and below-grade utility structures that are within 6 feet outside footprint indicated for new construction. Abandon utilities outside this area.
- H. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials, or recycled pulverized concrete/masonry according to backfill requirements in Section 312000 "Earth Moving."
- I. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.
- J. Promptly repair damage to adjacent buildings caused by demolition operations.

3.6 CLEANING

- 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. See Section 017419 "Construction Waste Management and Disposal."
- B. Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION 024116

SECTION 028211 - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY OF THE WORK

- A. This Section includes furnishing labor, materials, equipment, supplies, and performing all operations necessary to complete the removal of asbestos containing materials (ACM) by competent persons trained, knowledgeable and qualified in the techniques of asbestos abatement, handling and disposal of ACM and asbestos contaminated materials and the subsequent cleaning of contaminated areas, and complying with all applicable federal, state, and local regulations in accordance with these specifications.
- B. The work to be performed under this Contract consists of the removal, cleanup and disposal of all ACM and asbestos/waste contaminated elements from the former Forster Mill. Descriptions of ACM within Site buildings are provided in the Hazardous Materials Inventory report (see Section 003126) and are for informational purposes only; the Contractor is responsible for determining actual quantities of identified ACM to be removed.
- C. The Contractor will be responsible for preparation of a site-specific asbestos abatement project design and work plan for each work area.
- D. The Contractor will be responsible for the timely submission of all appropriate federal and state notifications and associated fees.
- E. The Contractor will be responsible for providing an independent air monitor for all visual evaluations and air clearances.
- F. The Contractor will be responsible for conducting personal monitoring on their employees during abatement activities.

1.2 REFERENCES

- A. Code of Federal Regulations (CFR) Publications:
 - 1. 29 CFR 1910.1001 - General Industry Standard for Asbestos
 - 2. 29 CFR 1926.1101 - Construction Standard for Asbestos
 - 3. 29 CFR 1910.134 - General Industry Standard for Respiratory Protection
 - 4. 29 CFR 1910.120 - Hazard Communication
 - 5. 40 CFR 61 Federal Register Vol. 49, April 5, 1984 Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAPS) – Asbestos

B. Applicable State Regulations:

1. 06-096 State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations (effective date: May 29, 2004).
2. CMR 411 State of Maine, Non-Hazardous Waste Transporter Licensing Regulations.
3. CMR 405 State of Maine, Solid Waste Management Regulations.

1.3 SUBMITTALS

A. Contractor Submittals

Submittals will be received by the Engineer in accordance with this section before material or equipment is purchased or work is performed. The Contractor will submit to the Engineer, for review, two copies of the information required herein. The adequacy and accuracy of submittals and their compliance with contract documents are the responsibility of the Contractor. All reviewing actions taken by the Owner will in no way relieve the Contractor of his/her quality control requirements.

B. General

The Contractor will submit:

1. A list of proposed subcontractors with their addresses, specialties and qualifications with their bid.
2. Certificate of Insurance indicating coverage for asbestos abatement work.

C. Work Practices and Procedures

1. Design and Work Plan: The Contractor will be responsible for preparation of a site-specific asbestos abatement project design and work plan for each work area. An Asbestos Abatement Design Consultant licensed by the Maine Department of Environmental Protection (MEDEP) will prepare the design. The Contractor will submit a written work plan and sketches of the work procedures to be used in the removal, disposal and replacement of materials. The abatement plan will include location of asbestos control area, decontamination area, equipment decontamination enclosure, interface of trades involved in the construction, sequencing of asbestos-related work, disposal plan, type of wetting agent and sealant to be used, site specific air monitoring plan, personal air monitoring program and a description of the method to be employed to reduce fiber releases. For each work area, the abatement plan will show point of controlled access to the building for transporting ACM from the regulated area to the exterior of the building. The abatement plan will show auxiliary make-up air points, location of

- HEPA exhaust ventilation units, location of HEPA exhaust and location of pressure differential monitor(s).
2. Project Log: The Contractor shall maintain a Project Log throughout the project. The log will contain notes concerning accidents that may happen and deviation from standard work procedures and project information. At project completion, the original log will be submitted to the Engineer.
 3. Work Schedule: A detailed work schedule will be prepared for the project including work hours, minimum daily staffing and goals and objectives.
 4. Waste Disposal: The Contractor will identify the proposed waste disposal landfill for the project and provide a copy of the state approval certification.
 5. Permits: The Contractor will provide a list of all permits, licenses or manifests to be applied for, including notification of the MEDEP.
 6. The Contractor shall prepare, for signature by the Owner, a MEDEP Project Monitoring Disclosure Form.
 7. The Contractor shall prepare for signature by the Owner, a MEDEP Asbestos Consultant Independent Business Relationship Disclosure Form.
- D. Product and Equipment Data: Submit manufacturers' literature, catalog cuts and product data sheets for products and equipment to be used in this abatement project. Attach Material Safety Data Sheets to Product Data Sheets. Material Safety Data Sheets for products containing chemicals the Contractor may be utilizing on the project will be submitted. The Contractor will submit to the Consultant two copies of the Material Safety Data Sheets attached to the Product Data sheet for new products brought on site for which a Material Safety Data Sheet has not been previously submitted. This submission does not relieve the Contractor of the OSHA requirements of Contractor responsibilities with reference to the Material Safety Data Sheets nor does it relieve the Contractor of responsibility for the subsequent proper use of the product.
- E. Personnel, Training, Medical, and Respiratory Fit Test Documentation: The Contractor will submit the following:
1. Experience Summary: Submit name and experience summary of proposed project supervisors and foremen.
 2. Respirator Protection Program: Submit a summary of the Contractor's Respiratory Protection Program as required by 29 CFR 1910.1001 and 1926.58.
 3. Personnel: Submit copies of Personnel Training Certificates, Medical Examinations, Medical Questionnaires, and Respirator Fit Tests:
 - Summary Sheet: Submit a summary sheet of employees, listed in alphabetical order, to include name, social security number, classification, MEDEP certificate number and dates of training, medical examinations, medical questionnaires and respirator fit tests.
 - Medical Examinations: Submit proof of medical examinations as required by 29 CFR 1910.1001. If the employee elects not to have a

medical examination, submit a notarized statement from the employee on the non-election.

- Medical Questionnaire: Submit a notarized statement that medical questionnaires have been administrated in accordance with 29 CFR 1926.1101-Appendix D.
- Respirator Fit Tests: Submit proof of respirator fit testing for employees to be assigned to the project. Fit Testing will be in accordance with 29 CFR 1910.1001-Appendix C and 1926.1101-Appendix C.

F. Asbestos Abatement Contractor's License: Submit a copy of the abatement Contractor's MEDEP license and the name of the Contractor's project Contract Representative.

G. Independent Asbestos Air Monitor: Submit the name, associated firm and copy of MEDEP license of the independent asbestos air monitor to perform air clearance sampling.

2.0 ASBESTOS EXECUTION

2.1 SITE INSPECTIONS

- A. The Engineer / Consultant shall monitor the remediation work and shall make the determination that abatement is complete.
- B. Abatement will be determined to be completed upon visual inspection of the areas of abatement and confirmatory sampling, as necessary.

2.2 ABATEMENT MONITORING REQUIREMENTS

- A. The Abatement Contractor shall provide an independent certified Asbestos Air Monitor employed by an Asbestos Consultant to conduct visual evaluations and air clearance sampling of asbestos work areas. The asbestos work areas may not be released from the Contractor's control until no visible debris remains in the regulated area, visual evaluations are completed, air clearance sampling in accordance with Maine DEP regulations (Chapter 425 Asbestos Management and Control), and clearance standards are met.

The following procedures shall be performed sequentially and documented:

- Visual Evaluation of Regulated Area. Following final abatement activities, including final clean and removal of equipment, supplies, and waste, and prior to removal of any layer of containment (if applicable) and conducting air clearance sampling, a visual evaluation of the asbestos work area shall be conducted to ensure that no visible dust or debris is present and that the work area, including containment, is dry. If debris is observed, the work area must be cleaned at the Contractor's expense and another visual evaluation conducted. Project documents must reflect these

activities. Air clearance sampling must not begin until the regulated area is free of visible debris.

- B. Air Clearance Sampling. Air clearance sampling must be performed and documented in accordance with the following:
- The containment must be completely dry prior to conducting air clearance sampling.
 - The total fiber count of each of the samples collected in the work area must be less than or equal to 0.010 f/cc (fibers per cubic centimeter) of air (as analyzed by phase contrast microscopy)
 - The minimum number of air clearance samples is as follows:
 - i. 3 samples for activities that contain less than 100 linear and/or square feet total of asbestos-containing materials (ACM);
 - ii. 5 samples for activities that contain more than 100 linear and/or square feet total of ACM
 - Phase Contact Microscopy (PCM) air clearance sampling flow rate must not exceed 16 liters of air per minute.
 - Air clearance samples must be collected utilizing aggressive techniques that are consistent with 40 CFR, Part 763, Subpart E (effective date December 14, 1987).
 - Failures of air clearance sampling (not meeting the clearance criteria of 0.010 f/cc require that the Contractor at own expense:
 - i. Reclean the work area until it meets the air clearance standards;
 - ii. Resample by transmission electron microscopy to obtain a clearance as per the Asbestos-Containing Materials in Schools rule, 40 CFR Part 763 (effective October 30, 1987); or
 - iii. Exclude potentially contaminated make up air and resample.
 - Air clearance samples shall be analyzed in accordance with the most current version of NIOSH (National Institute for Occupational Safety and Health) Methods 7400 or 7402, as applicable, the OSHA Reference Method Asbestos Standard for General Industry, 29 CFR 1910.1001 Appendix A (effective date July 20, 1986), or other approved EPA methodology.
- C. Final Inspection after Removal of Containment. Immediately upon completion of removal of the containment of the regulated area, the Asbestos Project Supervisor must visually inspect all surfaces within the regulated area for visible debris. If visible debris is observed, the regulated area must be cleaned by High Efficiency Particulate (HEPA) vacuum or wet methods until there is no visible dust or debris present. This final inspection must be documented in the daily project log. This documentation must include a statement that the regulated area was clear of visible debris and the name and signature of the person conducting this final inspection.

1.4 QUALITY ASSURANCE

- A. Job Site References: The Contractor will have on site at all times at least one copy of the following (stored in an onsite location as directed by Engineer):
1. Project Manual including Drawings and Specifications.
 2. Guidance for Controlling Asbestos Containing Materials in Building (EPA 560/5-85-024), June 1985.
 3. Asbestos Waste Management Guidance (EPA/530-SW-85-007), May 1985.
 4. A Guide to Respiratory Protection for the Asbestos Abatement Industry (EPA-560-OPTS-86-001), September 1986.
 5. Federal Register - Part II - OSHA - 29 CFR Parts 1910 and 1926.
 6. 40 CFR Part 61 Subpart M - NESHAPs Asbestos
 7. State of MEDEP, Chapter 425, Asbestos Management Regulations (effective date May 29, 2004).
- B. Safety Compliance: The Contractor will, in addition to detailed requirements of this specification:
1. Comply with laws, ordinances, rules and regulations of federal, state, regional and local authorities regarding handling, storing, transporting and disposing of asbestos waste materials;
 2. Comply with the applicable requirements of the current issue of 29 CFR 1910.1001; 40 CFR 61, Subparts M and 29 CFR 1926;
 3. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification and referenced documents vary, the most stringent requirement will apply.
- C. Respirator Program: The Contractor will establish a respirator program as required by 29 CFR 1910.1001 and 1926.58. This program will comply with all paragraphs of 29 CFR 1910.134.

1.5 AUTHORITY TO STOP WORK

- A. The Engineer has the authority to stop the abatement work at any time that conditions are not within the specifications and applicable regulations. The stoppage of work will continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the Owner and the Engineer. Standby time required for the Contractor's personnel to resolve violations will be at the Contractor's expense.
- B. Stop-Work Airborne Fiber Levels will be as follows:
1. Inside Work Area (Removal): 0.5 f/cc (with wet methods).
 2. Outside Work Area: 0.01 f/cc as measured in clean room and/or the HEPA exhaust.

- C. Stop work orders will be issued for, but not be limited, to the following:
 - 1. Excessive airborne fiber concentrations inside and/or outside work area.
 - 2. Breaks in containment barriers.
 - 3. Loss of negative air pressure (0.02 inches of water - minimum negative pressure to be maintained).
 - 4. Failure of workers to wear appropriate respiratory protection.

PART 2 - PRODUCTS

2.1 MATERIALS

The Contractor shall furnish materials as necessary to perform the work specified herein and to comply with State of Maine Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.

2.2 GENERAL EQUIPMENT TO BE PROVIDED BY Contractor

- A. The Contractor shall furnish equipment, including personnel protective equipment, as necessary to perform the work specified herein and to comply with State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.
- B. Workers and authorized visitors exposed to airborne concentrations of asbestos fibers will be provided with disposable, protective, whole body clothing, head coverings, gloves, and foot coverings, and use of tape. Protective clothing will be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing. Goggles will be provided in accordance with ANSI Z87.1 to personnel engaged in certain asbestos operations when a full-face respirator is not required.
- C. The Contractor shall provide water and electrical service as necessary to complete the Work.

2.3 ENCAPSULANTS

- A. A spray type encapsulant will be used as a lockdown of exposed surfaces and piping. The encapsulant will be able to withstand heat and have the capacity to be applied pre-heated.

2.4 ELECTRICAL

- A. All electrical installations will be accomplished under the direction of a Licensed Master Electrician.
- B. Ground fault circuit interrupters (GFCI) will be provided for all electrical equipment, to be installed outside the work area so that there is no live electrical wiring not protected by GFCI inside the work area. The Contractor will furnish

and install a portable GFCI Power Supply Board and receptacles including the following:

1. All circuits individually GFCI-protected;
2. Weatherproof enclosure NEMA 3 (rain-tight) with receptacle covers;
3. Construction durable, 16-gauge steel construction;
4. At least two 20 amp circuits (for Project Monitor);
5. Main circuit breaker; and
6. Components UL listed.

PART 3 – EXECUTION

3.1 GENERAL

- A. Develop an asbestos abatement design in accordance with Maine DEP Chapter 425 (Asbestos Management Regulations) for removal of asbestos-containing building materials, including a plan identifying the sequence of events and schedule for the work.
- B. Comply with applicable worker health and safety regulations including but not limited to 29 CFR 1910 and 29 CFR 1926.
- C. Furnish all labor, materials, and equipment to access areas requiring abatement. Provide and set up necessary engineering and safety controls to access hazardous materials within the building including walkways, railings or other barricades, and flooring supports.
- D. Provide and set up necessary environmental and engineering controls to contain potentially hazardous dusts from impacting the public, workers at the site, or occupants of adjacent properties.
- E. Limit access to the work area to the Contractor, the Contractor's employees, and persons designated by the Owner.
- F. The general location and estimated quantity of asbestos-containing materials identified at the Jefferson School is presented in the Hazardous Materials Inventory and associated figures in Appendix A; however, the Contractor is responsible to confirm/determine the actual quantities of asbestos-containing materials.
- G. Package asbestos-containing material waste for disposal by double bagging in 6-mil poly bags or double wrapping in 6-mil poly sheeting. Prior to bagging or wrapping, waste that may puncture disposal bags or wrap shall be enclosed with burlap or other suitable material that will prevent bag failure.
- H. Properly transport and dispose of all asbestos-containing materials in accordance with State of Maine and federal guidelines.

- I. The Contractor shall provide work area and perimeter monitoring and final asbestos abatement clearance evaluation, sampling, and analysis for each work area. Asbestos monitoring and clearance shall be performed in accordance with State of Maine and federal guidelines.
- J. The Contractor shall provide temporary weather-tight seals of any other openings that remain (e.g., windows and doorways, etc.) following asbestos abatement activities, as deemed necessary by the Owner or Engineer.

3.2 WORKER PROTECTION

A. General:

- 1. All asbestos abatement work will be performed in accordance with 29 CFR 1910.1001, 29 CFR 1926.1101, State of Maine Department of Environmental Protection, Chapter 425, Asbestos Management Regulations and as specified herein.
- 2. The Contractor will provide all authorized visitors with respirators, new filters, protective clothing, headgear, eye protection, footwear, and hard hats as in the procedures described herein and afford them the use of all facilities to hold them free of contamination of asbestos fibers.
- 3. The Contractor will provide the decontamination and work procedures to be followed by workers, as well as the results of the personal air monitoring. This information must be posted in the clean room.

B. Respiratory Protection:

- 1. Respiratory protection will be worn by all persons potentially exposed to asbestos from the initiation of the asbestos abatement project until all areas have been given clearance. Clearance will be obtained by visual observation and air monitoring conducted by a MEDEP-certified independent third-party asbestos air monitor.
- 2. Personal samples will be collected within the worker's breathing zone. Personal sampling will be the responsibility of the Contractor. Personal sampling results will be available on site no later than 24 hours after sampling.
- 3. The filters provided for respirators used during the course of this work will be NIOSH approved for asbestos fibers.

C. Protective Clothing:

- 1. The Contractor will provide to all workers, foreman and superintendents, protective disposable clothing consisting of full body coveralls, head covers, gloves and 18-inch-high boot-type covers and reusable footwear.
- 2. The Contractor will provide eye protection and hard hats as required by job conditions and safety regulations.
- 3. Reusable footwear, hard hats and eye protection devices will be left in the "contaminated equipment room" until the end of the asbestos abatement work.

4. Upon completion of asbestos abatement, the footwear will be disposed of as contaminated waste or cleaned thoroughly inside and out using soap and water before removing it from the work area or from equipment and access area.
5. All disposable protective clothing will be discarded and disposed of as asbestos waste when the wearer exits from the workspace to the outside through the decontamination facilities.
6. The color of the disposable clothing worn outside the work area will be a different color than the disposable clothing worn inside the work area.

3.3 DECONTAMINATION FACILITY

- A. For each abatement area the Contractor will provide decontamination facilities located in an area agreed upon as part of the approved Asbestos Abatement Plan.
- B. The decontamination facility will be constructed and maintained as specified herein and in compliance State of Maine Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.

3.4 MAINTENANCE OF THE WORK AREA

The Contractor shall maintain the work area as specified herein and in compliance with State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.

3.5 ASBESTOS CONTROL AREA CONSTRUCTION

The Contractor shall prepare and maintain the asbestos control area (e.g., the Containment Area) as necessary to perform the work specified herein and in compliance with State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.

3.6 ACM ABATEMENT METHODS

- A. The Contractor shall conduct ACM removal as specified herein and in compliance with State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations.
- B. The Contractor will be responsible to obtain work practice variances from MEDEP as necessary to complete the work.
- C. Wrap and Cut methods of pipe insulation removal will be permitted.

3.7 FINAL CLEANUP AND INSPECTION PROCEDURE

- D. After the removal of asbestos has been completed and before removal of barriers, piping and all other surfaces within the work area will be thoroughly wet cleaned and/or vacuumed. Waste containers (except those containers necessary for waste

from final cleanup) will be packed, cleaned, and removed from the work area prior to final cleanup and monitoring.

- E. The independent asbestos air monitor will evaluate the work area for visible material. The Contractor will re-clean, if necessary, and the air monitor will re-inspect.
- F. After the area passes the evaluation the air monitor will perform the final aggressive clearance. The samples will be analyzed by the PCM method with clearance criteria of all samples (total fiber count) of less than 0.010 f/cc.

3.8 DISPOSAL

- A. All waste material shall be properly handled, wetted, containerized, and disposed in accordance with State of Maine, Department of Environmental Protection, Chapter 425, Asbestos Management Regulations. The Contractor will count or measure the volume of each filled container leaving the work area and will maintain a written record of such.
- B. Warning labels, having waterproof print and permanent adhesive, will be affixed to the sides of all waste bags or transfer containers. Warning labels will be conspicuous and legible and in accordance with OSHA 1926.1101.
- C. Once a dumpster of waste containers has accumulated, the Contractor will arrange for transportation to the landfill, or to a pre-designated and approved off-site temporary location. Waste will not remain on-site longer than 5-days following completion of asbestos abatement activities.
- D. Waste Transportation and Disposal Regulations:
 - 1. It is the responsibility of the Contractor to determine and ensure compliance with the current waste handling regulations applicable to the work site and the current regulations for waste transportation to and disposal at each ultimate landfill. The Contractor will comply fully with these regulations and with all U.S. Department of Transportation and EPA requirements.
 - 2. If required, the Contractor (or SubContractor), at no additional cost, will maintain a valid hazardous waste transporter's permit and identification number and will document and fully comply with any hazardous waste manifesting requirements.
 - 3. The Contractor will provide legal transportation of this waste to the ultimate disposal landfill and will have the waste hauler and the landfill Owner complete all other required manifests, dump slips, or other forms. The completed original of the Waste Shipment Record and copies of the other forms will be sent to the Engineer within five calendar days.
 - 4. Waste may be transported to and temporarily stored at a pre-approved off-site storage area owned by the Contractor, but it must ultimately be disposed of at the specified landfill before any payments are made.

- E. Waste Disposal Fees: All Contractor contaminated waste handling costs, such as waste packaging, on-site/off-site storing/handling, transport/disposal, permitting, record keeping, and non-contaminated waste handling must be included in the Contractor's proposal as applicable to removal of asbestos materials and/or performance of the related abatement activities.

END OF SECTION

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing above- and below-grade site improvements.
 - 2. Disconnecting, capping, or sealing site utilities.
 - 3. Temporary erosion and sedimentation control.

1.2 MATERIAL OWNERSHIP

- A. Except for materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site and properly disposed.

1.3 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 EROSION AND SEDIMENTATION CONTROL

- A. Provide erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

3.3 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 - 1. Arrange with utility companies to shut off indicated utilities.
- B. Interrupting Existing Utilities: 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 Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
- C. Removal of underground utilities is included in earthwork sections; and in Section 024116 "Structure Demolition".

3.4 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.5 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials, and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Seeding.
 - 2. Sodding.
- B. Loam, sodding, soil conditioners, seeding mulch and landscaping shall be in accordance with the most-recent Maine Department of Transportation Specifications, Division 600.

1.2 DEFINITIONS

- A. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" and drawing designations for planting soils.

1.3 SUBMITTALS

- A. Certification of grass seed.
 - 1. Certification of each seed mixture for turf grass sod.
- B. Product certificates.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species. Per Maine Department of Transportation Standard Specification Section 618, appropriate for anticipated solar exposure.

2.2 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
- C. In accordance with Maine Department of Transportation Standard Specification Section 617.

2.3 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
- B. In accordance with Maine Department of Transportation Standard Specification Section 619.

PART 3 - EXECUTION

3.1 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.2 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate of 3 to 4 lb/1000 sq. ft..
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas.
 - 1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
- E. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch, peat mulch or planting soil within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

3.3 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.4 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll,

regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

- B. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings.

3.5 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Architect:
 - 1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
 - 2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

END OF SECTION 329200