TOWN OF CHESHIRE, CONNECTICUT

ANNOTATED REQUEST FOR PROPOSALS
LEGAL NOTICE

TOWN OF CHESHIRE, CONNECTICUT
REQUEST FOR PROPOSALS

Remediation of Former Ball and Socket Manufacturing
Project 1819-26
May 16, 2019

The Town of Cheshire will receive sealed bids for Remediation of Former Ball and Socket Manufacturing until 10:30 am on June 18, 2019. At that time proposals will be opened in public and read aloud. There is a mandatory pre bid conference to be held at the site, 493 West Main Street in Cheshire, CT to be held at 1:30 pm on May 22, 2019.

The work in this Contract includes but is not limited to remediation of lead based painted surfaces, asbestos remediation, removal and disposal of hazardous materials, and repair and replacement of historic wood siding. This work is being performed at the former Ball and Socket Manufacturing facility located at 493 West Main Street in Cheshire. The site is owned by a non profit entity, and the work is being funded by a grant from the State of Connecticut, and administered by the town of Cheshire. The work is limited to specific types of environmental remediation at several of the buildings on site. None of the buildings are currently occupied. In addition, the site buildings are subject to State Historic Preservation Standards and therefore the repair/re installation of certain components must meet those standards,.

The documents comprising the Request for Proposals may be on the Town’s website, www.cheshirect.org, under “Bids and Requests for Proposals.”

The Town of Cheshire reserves the rights to amend or terminate this Request for Proposals, accept all or any part of a proposal, reject all proposals, waive any informalities or non-material deficiencies in a proposal, and award the proposal to the proposer that, in the Town’s judgment, will be in the Town’s best interests.
TOWN OF CHESIRE, CONNECTICUT

REQUEST FOR PROPOSALS FOR
Remediation of Former Ball and Socket Manufacturing

Proposal Number: 1819-26
Proposal Opening Date: June 18, 2019
Proposal Opening Time: 10:30 AM
Proposal Opening Place: Cheshire Town Hall, Room 207

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The work in this Contract includes but is not limited to remediation of lead based painted surfaces, asbestos remediation, removal and disposal of hazardous materials, and repair and replacement of historic wood siding. This work is being performed at the former Ball and Socket Manufacturing facility located at 494 West Main Street in Cheshire. The site is owned by a non profit entity, and the work is being funded by a grant from the State of Connecticut, and administered by the town of Cheshire. The work is limited to specific types of environmental remediation at several of the buildings on site. None of the buildings are currently occupied. In addition, the site buildings are subject to State Historic Preservation Standards and therefore the repair/reinstallation of certain components must meet those standards.

One (1) original and two (2) copies of sealed proposals must be received in the Cheshire Town Hall, “Department of Public Works and Engineering, Room 213,” 84 South Main Street, Cheshire, CT 06410 by the date and time noted above. The Town of Cheshire (the “Town”) will not accept submissions by e-mail or fax. The Town will reject proposals received after the date and time noted above.

The documents comprising this Request for Proposals may be on the Town’s website, www.cheshirect.org, under “Bids and Requests for Proposals.” Each proposer is responsible for checking the Town’s website to determine if the Town has issued any addenda and, if so, to complete its proposal in accordance with the RFP as modified by the addenda.

Proposals must be held firm and cannot be withdrawn for sixty (60) calendar days after the opening date.

The Town reserves the rights to amend or terminate this Request for Proposals, accept all or any part of a proposal, reject all proposals, waive any informalities or non-material deficiencies in a proposal, and award the proposal to the proposer that, in the Town’s judgment, will be in the Town’s best interests.

This Request for Proposals (“RFP”) includes:

- Standard Instructions to Proposers
- Specifications
- Insurance Requirements
- Proposal Form
- Proposer’s Legal Status Disclosure
- Proposer’s Certification Concerning Equal Employment Opportunities and Affirmative Action Policy
- Proposer’s Non Collusion Affidavit
- Proposer’s Statement of References
- Addenda, if any
- The Contract in the form attached
1. **INTRODUCTION**

The Town of Cheshire (the “Town”) is soliciting proposals for Remediation of Former Ball and Socket Manufacturing Project 1819-26. This RFP is not a contract offer, and no contract will exist unless and until a written contract is signed by the Town and the successful proposer.

Interested parties should submit a proposal in accordance with the requirements and directions contained in this RFP. **Proposers are prohibited from contacting any Town employee, officer or official concerning this RFP, except as set forth in Section 6, below. A proposer’s failure to comply with this requirement may result in disqualification.**

If there are any conflicts between the provisions of these Standard Instructions to Proposers and any other documents comprising this RFP, these Standard Instructions to Proposers shall prevail.

2. **RIGHT TO AMEND OR TERMINATE THE RFP OR CONTRACT**

The Town may, before or after proposal opening and in its sole discretion, clarify, modify, amend or terminate this RFP if the Town determines it is in the Town’s best interest. Any such action shall be effected by a posting on the Town’s website, www.cheshirect.org, under “Proposals & RFP’s.” **Each proposer is responsible for checking the Town’s website to determine if the Town has issued any addenda and, if so, to complete its proposal in accordance with the RFP as modified by the addenda.**

3. **KEY DATES**

**Mandatory Pre Bid Conference:** May 22, 2019 1:30 pm at 493 West Main Street

**Receipt of Questions on RFP –** May 30, 2019 by 4:00 pm

**Proposal Opening:** June 18, 2019 at 10:30 am at Room 207 Town Hall

**Preliminary Notice of Award:** June 30, 2019

**Contract Execution:** July 21, 2019

The Preliminary Notice of Award and Contract Execution dates are anticipated, not certain, dates.

4. **OBTAINING THE RFP**

All documents that are a part of this RFP may be on the Town’s website, www.cheshirect.org, under “Proposals & RFP’s.”
5. **PROPOSAL SUBMISSION INSTRUCTIONS**

Proposals must be received in the Cheshire Town Hall, “Department of Public Works and Engineering, Room 213,” 84 South Main Street, Cheshire, CT 06410 prior to the date and time the proposals are scheduled to be opened publicly. Postmarks prior to the opening date and time do NOT satisfy this condition. The Town will not accept submissions by e-mail or fax. Proposers are solely responsible for ensuring timely delivery. The Town will NOT accept late proposals.

One (1) original and two (2) copies of all proposal documents must be submitted in sealed, opaque envelopes clearly labeled with the proposer’s name, the proposer’s address, the words "PROPOSAL DOCUMENTS,” and the Proposal Title, Proposal Number and Proposal Opening Date. The Town may decline to accept proposals submitted in unmarked envelopes that the Town opens in its normal course of business. The Town may, but shall not be required to, return such proposal documents and inform the proposer that the proposal documents may be resubmitted in a sealed envelope properly marked as described above.

Proposal prices must be submitted on the Proposal Form included in this RFP. All blank spaces for proposal prices must be completed in ink or be typewritten; proposal prices must be stated in both words and figures. The person signing the Proposal Form must initial any errors, alterations or corrections on that form. Ditto marks or words such as “SAME” shall not be used in the Proposal Form.

Proposals may be withdrawn personally or in writing provided that the Town receives the withdrawal prior to the time and date the proposals are scheduled to be opened. Proposals are considered valid, and may not be withdrawn, cancelled or modified, for sixty (60) days after the opening date, to give the Town sufficient time to review the proposals, investigate the proposers’ qualifications, secure any required municipal approvals, and execute a binding contract with the successful proposer.

An authorized person representing the legal entity of the proposer must sign the Proposal Form and all other forms included in this RFP.

6. **QUESTIONS AND AMENDMENTS**

Questions concerning the process and procedures applicable to this RFP are to be submitted in writing (including by e-mail or fax) and directed only to:

Name: Louis Zullo  
Department: Town Manager’s Office  
E-mail: IZullo@cheshirect.org  
Fax: 203-271-6639

Questions concerning this RFP’s Specifications are to be submitted in writing (including by e-mail or fax) and directed only to:

Name: Walter J. Gancarz, P.E.  
Department: Public Works and Engineering  
E-mail: wgancarz@cheshirect.org  
Fax: 203-271-6659
Proposers are prohibited from contacting any other Town employee, officer or official concerning this RFP. A proposer’s failure to comply with this requirement may result in disqualification.

The appropriate Town representative listed above must receive any questions from proposers no later than seven (7) business days before the proposal opening date. That representative will confirm receipt of a proposer’s questions by e-mail. The Town will answer all written questions by issuing one or more addenda, which shall be a part of this RFP and the resulting Contract, containing all questions received as provided for above and decisions regarding same.

At least four (4) calendar days prior to proposal opening, the Town will post any addenda on the Town’s website, www.cheshirect.org, under “Proposals & RFP’s.” Each proposer is responsible for checking the website to determine if the Town has issued any addenda and, if so, to complete its proposal in accordance with the RFP as modified by the addenda.

No oral statement of the Town, including oral statements by the Town representatives listed above, shall be effective to waive, change or otherwise modify any of the provisions of this RFP, and no proposer shall rely on any alleged oral statement.

7. **ADDITIONAL INFORMATION**

The Town reserves the right, either before or after the opening of proposals, to ask any proposer to clarify its proposal or to submit additional information that the Town in its sole discretion deems desirable.

8. **COSTS FOR PREPARING PROPOSAL**

Each proposer’s costs incurred in developing its proposal are its sole responsibility, and the Town shall have no liability for such costs.

9. **OWNERSHIP OF PROPOSALS**

All proposals submitted become the Town’s property and will not be returned to proposers.

10. **FREEDOM OF INFORMATION ACT**

All information submitted in a proposal or in response to a request for additional information is subject to disclosure under the Connecticut Freedom of Information Act as amended and judicially interpreted. A proposer’s responses may contain financial, trade secret or other data that it claims should not be public (the “Confidential Information”). A proposer must identify specifically the pages and portions of its proposal or additional information that contain the claimed Confidential Information by visibly marking all such pages and portions. Provided that the proposer cooperates with the Town as described in this section, the Town shall, to the extent permitted by law, protect from unauthorized disclosure such Confidential Information.

If the Town receives a request for a proposer’s Confidential Information, it will promptly notify the proposer in writing of such request and provide the proposer with a copy of any written disclosure request. The proposer may provide written consent to the disclosure, or may object to
the disclosure by notifying the Town in writing to withhold disclosure of the information, identifying in the notice the basis for its objection, including the statutory exemption(s) from disclosure. The proposer shall be responsible for defending any complaint brought in connection with the nondisclosure, including but not only appearing before the Freedom of Information Commission, and providing witnesses and documents as appropriate.

11. **REQUIRED DISCLOSURES**

In its Proposal Form each proposer must disclose, if applicable:

- Its inability or unwillingness to meet any requirement of this RFP, including but not only any of the Contract Terms contained in Section 26, below;

- If it is listed on the State of Connecticut’s Debarment List;

- If it is ineligible, pursuant to Conn. Gen. Stat. § 31-57b, to be awarded the Contract because of occupational safety and health law violations;

- All resolved and pending arbitrations and litigation matters in which the proposer or any of its principals (regardless of place of employment) has been involved within the last ten (10) years;

- All criminal proceedings in which the proposer or any of its principals (regardless of place of employment) has ever been the subject; and

- Each instance in which it or any of its principals (regardless of place of employment) has ever been found to have violated any state or local ethics law, regulation, ordinance, code, policy or standard, or to have committed any other offense arising out of the submission of proposals or bids or the performance of work on public works projects or contracts.

A proposer’s acceptability based on these disclosures lies solely in the Town’s discretion.

12. **REFERENCES**

Each proposer must complete and submit the Proposer’s Statement of References form included in this RFP.

13. **LEGAL STATUS**

If a proposer is a corporation, limited liability company, or other business entity that is required to register with the Connecticut Secretary of the State’s Office, it must have a current registration on file with that office. The Town may, in its sole discretion, request acceptable evidence of any proposer’s legal status.

14. **PROPOSAL (BID) SECURITY**

“THIS ITEM IS NOT APPLICABLE TO THIS RFP”
Each proposal must be accompanied by a certified check of the proposer or a proposal (bid) bond with a surety acceptable to the Town in an amount equal to at least TEN PERCENT (10%) of the proposal amount. The proposal (bid) bond shall be written by a company or companies licensed to issue bonds in the State of Connecticut, which company or companies shall have at least an “A-” VIII policyholders rating as reported in the latest edition of Best Publication’s Key Rating Guide. The successful proposer, upon its refusal or failure to execute and deliver the Contract, certificate(s) of insurance, W-9 form, performance security or other documents required by this RFP within ten (10) business days of written notification of preliminary award, unless the Town otherwise agrees in writing, shall forfeit to the Town, as liquidated damages for such failure or refusal, the security submitted with its proposal.

Upon the successful proposer’s execution of the Contract in the form enclosed with this RFP, the Town shall return the proposal security to the successful proposer and to all other proposers.

15. **PRESUMPTION OF PROPOSER’S FULL KNOWLEDGE**

Each proposer is responsible for having read and understood each document in this RFP and any addenda issued by the Town. A proposer’s failure to have reviewed all information that is part of or applicable to this RFP, including but not only any addenda posted on the Town’s website, shall in no way relieve it from any aspect of its proposal or the obligations related thereto.

Each proposer is deemed to be familiar with and is required to comply with all federal, state and local laws, regulations, ordinances, codes and orders that in any manner relate to this RFP or the performance of the work described herein.

By submitting a proposal, each proposer represents that it has thoroughly examined and become familiar with the scope of work outlined in this RFP, and it is capable of performing the work to achieve the Town’s objectives. If applicable, each proposer shall visit the site, examine the areas and thoroughly familiarize itself with all conditions of the property before preparing its proposal.

16. **SUBSTITUTION FOR NAME BRANDS**

The proposer must attach detailed information concerning deviations from any name brands specified in the RFP and explain in detail how the substitution compares with the name brand’s specifications. The Town in its sole discretion shall decide whether the substitution is acceptable.

17. **TAX EXEMPTIONS**

The Town is exempt from the payment of federal excise taxes and Connecticut sales and use taxes. Federal Tax Exempt #066-001971. Exemption from State sales tax per Conn. Gen. Stat. Chapter 219, § 12-412(1). No exemption certificates are required, and none will be issued.

18. **INSURANCE**

The successful proposer shall, at its own expense and cost, obtain and keep in force at least the insurance listed in the Insurance Requirements that are a part of this RFP. The Town reserves the right to request from the successful proposer a complete, certified copy of any required insurance policy.
19. PERFORMANCE SECURITY

The successful proposer shall furnish a performance bond, covering the faithful performance of the Contract (the “Performance Security”). The Performance Security shall be the full amount of the Contract price, and in a form reasonably acceptable to the Town. If the Performance Security is a performance bond, it shall be issued by a company licensed by the State of Connecticut that has at least an “A-” VIII policyholders rating according to Best Publication’s latest edition Key Rating Guide. The cost of the Performance Security shall be included in the proposal price.

In addition to the Performance Security, the successful proposer shall furnish a bond covering the successful proposer’s payment to its subcontractors and suppliers of all obligations arising under the Contract (the “Payment Bond”). The Payment Bond shall be (a) in the full amount of the Contract price; (b) in a form reasonably acceptable to the Town; and (c) issued by a company licensed by the State of Connecticut that has at least an “A-” VIII policyholders rating according to Best Publication’s latest edition Key Rating Guide. The cost of the Payment Bond shall be included in the proposal price.

20. DELIVERY ARRANGEMENTS

THIS ITEM IS NOT APPLICABLE TO THIS RFP

21. AWARD CRITERIA; SELECTION; CONTRACT EXECUTION

All proposals will be publicly opened and read aloud as received on the date, at the time, and at the place identified in this RFP. Proposers may be present at the opening.

The Town reserves the right to correct, after proposer verification, any mistake in a proposal that is a clerical error, such as a price extension, decimal point error or FOB terms. If an error exists in an extension of prices, the unit price shall prevail. In the event of a discrepancy between the price quoted in words and in figures, the words shall control.

The Town reserves the rights to accept all or any part of a proposal, reject all proposals, and waive any informalities or non-material deficiencies in a proposal. The Town also reserves the right, if applicable, to award the purchase of individual items under this RFP to any combination of separate proposals or proposers.

The Town will accept the proposal that, all things considered, the Town determines is in its best interests. Although price will be an important factor in most RFPs, it will not be the only basis for award. Due consideration may also be given to a proposer’s experience, references, service, ability to respond promptly to requests, past performance, and other criteria relevant to the Town’s interests, including compliance with the procedural requirements stated in this RFP.

The Town will not award the proposal to any business that or person who is in arrears or in default to the Town with regard to any tax, debt, contract, security or any other obligation.
If the lowest proposer meets all specifications, is responsive, and, if applicable, qualified, but the proposal is not acceptable to the Town Manager or, if applicable, the Public Building Commission or the Board of Education, the matter must be referred to the Town Council for its decision on whether to reject all proposals, to accept a higher proposal, or to take such other action as may be in the Town’s best interests.

The Town will select the proposal that it deems to be in the Town’s best interest and issue a Preliminary Notice of Award to the successful proposer. The award may be subject to further discussions with the proposer. The making of a preliminary award to a proposer does not provide the proposer with any rights and does not impose upon the Town any obligations. The Town is free to withdraw a preliminary award at any time and for any reason. A proposer has rights, and the Town has obligations, only if and when a Contract is executed by the Town and the proposer.

If the proposer does not execute the Contract within ten (10) business days of the date of the Preliminary Notice of Award, unless extended by the Town, the Town may call any proposal security provided by the proposer and may enter into discussions with another proposer.

The Preliminary Notice of Award and Contract Execution dates in Section 3’s Key Dates are anticipated, not certain, dates.

22. **AFFIRMATIVE ACTION, AND EQUAL OPPORTUNITY**

Each proposer must submit a completed Proposer’s Certification Concerning Equal Employment Opportunities and Affirmative Action Policy form included with this RFP. Proposers with fewer than ten (10) employees should indicate that fact on the form and return the form with their proposals.

23. **NONRESIDENT REAL PROPERTY CONTRACTORS**

If the successful proposer is a “nonresident contractor” as defined in Conn. Gen. Stat. § 12-430(7)(A) as amended, it shall comply fully with the provisions of § 12-430(7) and, prior to execution of the Contract, shall furnish the Town with a copy of the requisite certificate of compliance set forth in § 12-430(7)(E). The successful proposer agrees to defend, indemnify, and hold harmless the Town, its employees, officers, officials, agents, volunteers and independent contractors, including any of the foregoing sued as individuals (collectively, the “Town Indemnified Parties”), from any and all taxes, interest and penalties that the State of Connecticut asserts are due with respect to the successful proposer’s activities under the Contract.

The successful proposer shall also be required to pay any and all attorney’s fees incurred by the Town Indemnified Parties in enforcing any of the successful proposer’s obligations under this section, whether or not a lawsuit or other proceeding is commenced, which obligations shall survive the termination or expiration of the Contract.

24. **COMPLIANCE WITH IMMIGRATION LAWS**

By submitting a proposal, each proposer confirms that it has complied, and during the term of the Contract will comply, with the Immigration Reform and Control Act (“IRCA”) and that each
person it provides under the Contract will at all times be authorized for employment in the United States of America. Each proposer confirms that it has a properly completed Employment Eligibility Verification, Form I-9, for each person who will be assigned under the Contract and that it will require each subcontractor, if any, to confirm that it has a properly completed Form I-9 for each person who will be assigned under the Contract.

The successful proposer shall defend, indemnify, and hold harmless the Town, its employees, officers, officials, agents, volunteers and independent contractors, including any of the foregoing sued as individuals (collectively, the “Town Indemnified Parties”), against any and all proceedings, suits, actions, claims, damages, injuries, awards, judgments, losses or expenses, including fines, penalties, punitive damages, attorney’s fees and costs, brought or assessed against, or incurred by, the Town Indemnified Parties related to or arising from the obligations under IRCA imposed upon the successful proposer or its subcontractor. The successful proposer shall also be required to pay any and all attorney’s fees and costs incurred by the Town Indemnified Parties in enforcing any of the successful proposer’s obligations under this provision, whether or not a lawsuit or other proceeding is commenced, which obligations shall survive the termination or expiration of the Contract.

25. **NON COLLUSION AFFIDAVIT**

Each proposer shall submit a completed Proposer’s Non Collusion Affidavit that is part of this RFP.

26. **CONTRACT TERMS**

The following provisions will be mandatory terms of the Town’s Contract with the successful proposer. If a proposer is unwilling or unable to meet any of these Contract Terms, the proposer must disclose that inability or unwillingness in its Proposal Form (see Section 11 of these Standard Instructions to Proposers):

a. **DEFENSE, HOLD HARMLESS AND INDEMNIFICATION**

The successful proposer agrees, to the fullest extent permitted by law, to defend, indemnify, and hold harmless the Town, its employees, officers, officials, agents, volunteers and independent contractors, including any of the foregoing sued as individuals (collectively, the “Town Indemnified Parties”), from and against all proceedings, suits, actions, claims, damages, injuries, awards, judgments, losses or expenses, including attorney’s fees, arising out of or relating, directly or indirectly, to the successful proposer’s malfeasance, misconduct, negligence or failure to meet its obligations under the RFP or the Contract. The successful proposer’s obligations under this section shall not be limited in any way by any limitation on the amount or type of the successful proposer’s insurance. Nothing in this section shall obligate the successful proposer to indemnify the Town Indemnified Parties against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of the Town Indemnified Parties.

In any and all claims against the Town Indemnified Parties made or brought by any employee of the successful proposer, or anyone directly or indirectly employed or contracted with by the
successful proposer, or anyone for whose acts or omissions the successful proposer is or may be liable, the successful proposer’s obligations under this section shall not be limited by any limitation on the amount or type of damages, compensation or benefits payable by the successful proposer under workers’ compensation acts, disability benefit acts, or other employee benefits acts.

The successful proposer shall also be required to pay any and all attorney’s fees incurred by the Town Indemnified Parties in enforcing any of the successful proposer’s obligations under this section, which obligations shall survive the termination or expiration of this RFP and the Contract.

As a municipal agency of the State of Connecticut, the Town will NOT defend, indemnify, or hold harmless the successful proposer.

b. ADVERTISING

The successful proposer shall not name the Town in its advertising, news releases, or promotional efforts without the Town’s prior written approval.

If it chooses, the successful proposer may list the Town in a Statement of References or similar document required as part of its response to a public procurement. The Town’s permission to the successful proposer to do so is not a statement about the quality of the successful proposer’s work or the Town’s endorsement of the successful proposer.

c. W-9 FORM

The successful proposer must provide the Town with a completed W-9 form before Contract execution.

d. PAYMENTS

Proposers are encouraged to offer discounts for early payment. All other payments are to be made 30 days after the appropriate Town employee receives and approves the invoice, unless otherwise specified in the Specifications.

In each of its contracts with subcontractors or materials suppliers, the successful proposer shall agree to pay any amounts due for labor performed or materials furnished not later than thirty (30) days after the date the successful proposer receives payment from the Town that encompasses the labor performed or materials furnished by such subcontractor or material supplier. The successful proposer shall also require in each of its contracts with subcontractors that such subcontractor shall, within thirty (30) days of receipt of payment from the successful proposer, pay any amounts due any sub-subcontractor or material supplier, whether for labor performed or materials furnished.

Each payment application or invoice shall be accompanied by a statement showing the status of all pending change orders, pending change directives and approved changes to the Contract. Such statement shall identify the pending change orders and pending change directives, and shall include the date such change orders and change directives were initiated, additional cost and/or time associated with their performance and a description of any work completed. The successful
proposer shall require each of its subcontractors and suppliers to include a similar statement with each of their payment applications or invoices.”

e. **TOWN INSPECTION OF WORK**

The Town may inspect the successful proposer’s work at all reasonable times. This right of inspection is solely for the Town’s benefit and does not transfer to the Town the responsibility for discovering patent or latent defects. The successful proposer has the sole and exclusive responsibility for performing in accordance with the Contract.

f. **REJECTED WORK OR MATERIALS**

The successful proposer, at its sole cost and expense, shall remove from the Town’s property rejected items, commodities and/or work within 48 hours of the Town’s notice of rejection. Immediate removal may be required when safety or health issues are present.

g. **MAINTENANCE AND AVAILABILITY OF RECORDS**

The successful proposer shall maintain all records related to the work described in the RFP for a period of five (5) years after final payment under the Contract or until all pending Town, state and federal audits are completed, whichever is later. Such records shall be available for examination and audit by Town, state and federal representatives during that time.

h. **SUBCONTRACTING**

Prior to entering into any subcontract agreement(s) for the work described in the Contract, the successful proposer shall provide the Town with written notice of the identity (full legal name, street address, mailing address (if different from street address), and telephone number) of each proposed subcontractor. The Town shall have the right to object to any proposed subcontractor by providing the successful proposer with written notice thereof within seven (7) business days of receipt of all required information about the proposed subcontractor. If the Town objects to a proposed subcontractor, the successful proposer shall not use that subcontractor for any portion of the work described in the Contract.

All permitted subcontracting shall be subject to the same terms and conditions as are applicable to the successful proposer. The successful proposer shall remain fully and solely liable and responsible to the Town for performance of the work described in the Contract. The successful proposer also agrees to promptly pay each of its subcontractors within thirty (30) days of receipt of payment from the Town or otherwise in accordance with law. The successful proposer shall assure compliance with all requirements of the Contract. The successful proposer shall also be fully and solely responsible to the Town for the acts and omissions of its subcontractors and of persons employed, whether directly or indirectly, by its subcontractor(s).

i. **PREVAILING WAGES**

State law may require that wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker under the Contract and the amount of payment or contribution
paid or payable on behalf of each such person to any employee welfare fund, as defined in Conn. Gen. Stat. § 31-53, as amended, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town. A successful proposer who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day. Upon Contract award, the successful proposer must certify under oath to the State Labor Commissioner the pay scale to be used by the successful proposer and its subcontractors.

j. PREFERENCES

**THIS ITEM IS NOT APPLICABLE TO THIS RFP**

k. WORKERS COMPENSATION

Prior to Contract execution, the Town will require the tentative successful proposer to provide a current statement from the State Treasurer that, to the best of her knowledge and belief, as of the date of the statement, the tentative successful proposer was not liable to the State for any workers’ compensation payments made pursuant to Conn. Gen. Stat. § 31-355.

l. SAFETY

The successful proposer and each of its permitted subcontractors shall furnish proof that each employee performing the work of a mechanic, laborer or worker under the Contract has completed a course of at least ten (10) hours in construction safety and health approved by the federal Occupational Safety and Health Administration or has completed a new miner training program approved by the Federal Mine Safety and Health Administration. Such proof shall be provided with the certified payroll submitted for the first week each such employee, mechanic, laborer, or worker begins work under the Contract.

m. COMPLIANCE WITH LAWS

The successful proposer shall comply with all applicable laws, regulations, ordinances, codes and orders of the United States, the State of Connecticut and the Town related to its proposal and the performance of the work described in the Contract.

n. LICENSES AND PERMITS

The successful proposer certifies that, throughout the Contract term, it shall have and provide proof of all approvals, permits and licenses required by the Town and/or any state or federal authority. The successful proposer shall immediately and in writing notify the Town of the loss or suspension of any such approval, permit or license.

o. AMENDMENTS

The Contract may not be altered or amended except by the written agreement of both parties.

p. ENTIRE AGREEMENT
It is expressly understood and agreed that the Contract contains the entire agreement between the parties, and that the parties are not, and shall not be, bound by any stipulations, representations, agreements or promises, oral or otherwise, not printed or inserted in the Contract or its attached exhibits.

q. **VALIDITY**

The invalidity of one or more of the phrases, sentences or clauses contained in the Contract shall not affect the remaining portions so long as the material purposes of the Contract can be determined and effectuated.

r. **CONNECTICUT LAW AND COURTS**

The Contract shall be governed by and construed in accordance with the internal laws (as opposed to the conflicts of law provisions) of the State of Connecticut, and the parties irrevocably submit in any suit, action or proceeding arising out of the Contract to the jurisdiction of the United States District Court for the District of Connecticut or of any court of the State of Connecticut, as applicable.

s. **NON-EMPLOYMENT RELATIONSHIP**

The Town and the successful proposer are independent parties. Nothing contained in the Contract shall create, or be construed or deemed as creating, the relationships of principal and agent, partnership, joint venture, employer and employee, and/or any relationship other than that of independent parties contracting with each other solely for the purpose of carrying out the terms and conditions of the Contract. The successful proposer understands and agrees that it is not entitled to employee benefits, including but not limited to workers compensation and employment insurance coverage, and disability. The successful proposer shall be solely responsible for any applicable taxes.

**END OF STANDARD INSTRUCTIONS TO PROPOSERS**
TOWN OF CHESHIRE, CONNECTICUT

SPECIFICATIONS FOR

Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26

The work in this Contract includes but is not limited to remediation of lead based painted surfaces, asbestos remediation, removal and disposal of hazardous materials, and repair and replacement of historic wood siding. This work is being performed at the former Ball and Socket Manufacturing facility located at 493 West Main Street in Cheshire. The site is owned by a non profit entity, and the work is being funded by a grant from the State of Connecticut, and administered by the town of Cheshire. The work is limited to specific types of environmental remediation at several of the buildings on site. None of the buildings are currently occupied. In addition, the site buildings are subject to State Historic Preservation Standards and therefore the repair/re installation of certain components must meet those standards. The work basically includes the following items:

Old Post Office (Building 2):

* Removal of exterior siding that contains lead-based paint (LBP). Remediation and reinstallation of siding. For any siding that cannot be repaired, provide new siding replacement as specified by the Owner's Architect. **Contractor to install repaired/new siding on southerly side of Post Office Building for review by Architect prior to installing on others parts of the building.**

* Removal or stabilization option for interior LBP. LBP identified on metal columns;

* Bird guano and other animal fecal matter removal in the attic space;

* Window removal not in work scope – windows to be removed by the Owner. Loose window paint and window glazing to be removed (temporary stabilization).

Mechanics Building/Former Maintenance (Building 3):

* Abatement of pipe insulation and mudded insulation on pipe fittings and floor tile;

  Window removal not in work scope – windows to be removed by the Owner. Loose window paint and window glazing to be removed (temporary stabilization).

* Removal of exterior siding that contains lead-based paint (LBP). Remediation and reinstallation of siding. For any siding that cannot be repaired, provide new siding replacement as specified by the Owner's Architect.
* Removal or stabilization option for LBP associated with wood fascia and soffit (if necessary).

**Main Building (Building 1):**

* Removal and Disposal of miscellaneous materials (bulbs, ballasts, thermostats, containers etc.) throughout "L" shaped portion of the building and the front offices;

* Press Room abatement of duct insulation;

* Ceiling deck paper insulation, associated with "L" shaped portion of the building, partial removal and/or stabilization in areas where damaged/unstable;

* Removal of all LBP associated with the "L" shaped portion of the building;

* Abatement of all asbestos in the boiler room including dismantling and abatement of the boiler units and all equipment in the area.
END OF SPECIFICATIONS
TOWN OF CHESHIRE, CONNECTICUT

INSURANCE REQUIREMENTS FOR

Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26
Insurance Requirements/Standard Service Contract

Vendor shall agree to maintain in force at all times during which services are to be performed the following coverages placed with company(ies) licensed by the State of Connecticut which have at least an “A-” VIII policyholders rating according to Best Publication’s latest edition Key Rating Guide.

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Minimum Limits</th>
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<tbody>
<tr>
<td>General Liability*</td>
<td></td>
</tr>
<tr>
<td>Each Occurrence</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>General Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Products/Completed Operations Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Auto Liability*</td>
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<tr>
<td>Combined Single Limit</td>
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<tr>
<td>Each Accident</td>
<td>$1,000,000</td>
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<tr>
<td>Umbrella*</td>
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<tr>
<td>Each Occurrence</td>
<td>$1,000,000</td>
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<tr>
<td>Aggregate</td>
<td>$1,000,000</td>
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</tbody>
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* “The Town of Cheshire” shall be named as “Additional Insured”. Coverage is to be provided on a primary, noncontributory basis. Wavier of subrogation to be provided.

If any policy is written on a “Claims Made” basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

Workers’ Compensation and WC Statutory Limits
<table>
<thead>
<tr>
<th>Coverage</th>
<th>Minimum Limits</th>
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<tr>
<td>Employers’ Liability</td>
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<td>EL Each Accident</td>
<td>$100,000</td>
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<tr>
<td>EL Disease Each Employee</td>
<td>$100,000</td>
</tr>
<tr>
<td>EL Disease Policy Limit</td>
<td>$500,000</td>
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Original, completed Certificates of Insurance must be presented to the Acting Purchasing Agent prior to purchase order/contract issuance. Vendor agrees to provide replacement/renewal certificates at least 60 days prior to the expiration of the policy. Should any of the above described policies be cancelled before the expiration date, written notice must be made to the City 30 days prior to cancellation.
PROPOSER’S FULL LEGAL NAME: ____________________________________________________________

Pursuant to and in full compliance with the RFP, the undersigned proposer, having visited the site or property if applicable, and having thoroughly examined each and every document comprising the RFP, including any addenda, hereby offers and agrees as follows:

To provide the products and/or services specified in, and upon the terms and conditions of, the RFP for the **Total Lump Sum** of __________________________/100 Dollars (write out in words) ($__________________).

ACKNOWLEDGEMENT

In submitting this Proposal Form, the undersigned proposer acknowledges that the price(s) include all labor, materials, transportation, hauling, overhead, fees and insurances, bonds or letters of credit, profit, security, permits and licenses, and all other costs to cover the completed work called for in the RFP. Except as otherwise expressly stated in the RFP, no additional payment of any kind will be made for work accomplished under the price(s) as proposed.

REQUIRED DISCLOSURES

1. **Exceptions to the RFP**

   _____ This proposal does not take exception to any requirement of the RFP, including but not only any of the Contract Terms set forth in Section 26 of the Standard Instructions to Proposers.

   OR

   _____ This proposal takes exception(s) to certain of the RFP requirements, including but not only the following Contract Terms set forth in Section 26 of the Standard Instructions to Proposers. **Attached is a sheet fully describing each such exception.**

2. **State Debarment List**

   Is the proposer on the State of Connecticut’s Debarment List?

   _____ Yes
   _____ No
3. **Occupational Safety and Health Law Violations**

Has the proposer or any firm, corporation, partnership or association in which it has an interest (1) been cited for three (3) or more willful or serious violations of any occupational safety and health act or of any standard, order or regulation promulgated pursuant to such act, during the three-year period preceding the proposal (provided such violations were cited in accordance with the provisions of any state occupational safety and health act or the Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency or court having jurisdiction) or (2) received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the proposal?

[ ] Yes
[ ] No

If “yes,” attach a sheet fully describing each such matter.

4. **Arbitration/Litigation**

Has either the proposer or any of its principals (regardless of place of employment) been involved for the most recent ten (10) years in any resolved or pending arbitration or litigation?

[ ] Yes
[ ] No

If “yes,” attach a sheet fully describing each such matter.

5. **Criminal Proceedings**

Has the proposer or any of its principals (regardless of place of employment) ever been the subject of any criminal proceedings?

[ ] Yes
[ ] No

If “yes,” attach a sheet fully describing each such matter.

6. **Ethics and Offenses in Public Projects or Contracts**

Has either the proposer or any of its principals (regardless of place of employment) ever been found to have violated any state or local ethics law, regulation, ordinance, code, policy or standard, or to have committed any other
offense arising out of the submission of proposals or bids or the performance of work on public works projects or contracts?

_____ Yes
_____ No

If “yes,” attach a sheet fully describing each such matter.

NOTE: THIS DOCUMENT, IN ORDER TO BE CONSIDERED A VALID PROPOSAL, MUST BE SIGNED BY A PRINCIPAL OFFICER OR OWNER OF THE BUSINESS ENTITY THAT IS SUBMITTING THE PROPOSAL. SUCH SIGNATURE CONSTITUTES THE PROPOSER’S REPRESENTATIONS THAT IT HAS READ, UNDERSTOOD AND FULLY ACCEPTED EACH AND EVERY PROVISION OF EACH DOCUMENT COMPROMISING THE RFP, UNLESS AN EXCEPTION IS DESCRIBED ABOVE.

BY ___________________________   TITLE:_____________________________
(PRINT NAME)

__________________________________   DATE:_____________________________
(SIGNATURE)

END OF PROPOSAL FORM
TOWN OF CHESHIRE, CONNECTICUT

PROPOSER’S LEGAL STATUS DISCLOSURE

Please fully complete the applicable section below, attaching a separate sheet if you need additional space.

For purposes of this disclosure, “permanent place of business” means an office continuously maintained, occupied and used by the proposer’s regular employees regularly in attendance to carry on the proposer’s business in the proposer’s own name. An office maintained, occupied and used by a proposer only for the duration of a contract will not be considered a permanent place of business. An office maintained, occupied and used by a person affiliated with a proposer will not be considered a permanent place of business of the proposer.

IF A SOLELY OWNED BUSINESS:

Proposer’s Full Legal Name ________________________________
Street Address ________________________________
Mailing Address (if different from Street Address) ________________________________
Owner’s Full Legal Name ________________________________
Number of years engaged in business under sole proprietor or trade name __________
Does the proposer have a “permanent place of business” in Connecticut, as defined above?

_______ Yes    _______ No

If yes, please state the full street address (not a post office box) of that “permanent place of business.”

______________________________

IF A CORPORATION:

Proposer’s Full Legal Name ________________________________
Street Address ________________________________
Mailing Address (if different from Street Address) ________________________________
Owner’s Full Legal Name ________________________________
Number of years engaged in business ________________________________
Names of Current Officers

_________________   ___________________   ___________________
President         Secretary        Chief Financial Officer

Does the proposer have a “permanent place of business” in Connecticut, as defined above?
_______ Yes ________ No

If yes, please state the full street address (not a post office box) of that “permanent place of business.”

________________________________________________________

IF A LIMITED LIABILITY COMPANY:

Proposer’s Full Legal Name

Street Address

Mailing Address (if different from Street Address)

Owner’s Full Legal Name

Number of years engaged in business

Names of Current Manager(s) and Member(s)

<table>
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<tr>
<th>Name &amp; Title (if any)</th>
<th>Residential Address (street only)</th>
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</tbody>
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Does the proposer have a “permanent place of business” in Connecticut, as defined above?

_______ Yes ________ No

If yes, please state the full street address (not a post office box) of that “permanent place of business.”

________________________________________________________

IF A PARTNERSHIP:

Proposer’s Full Legal Name
Street Address

Mailing Address (if different from Street Address)

Owner’s Full Legal Name

Number of years engaged in business

Names of Current Partners

Name & Title (if any) Residential Address (street only)

Name & Title (if any) Residential Address (street only)

Name & Title (if any) Residential Address (street only)

Name & Title (if any) Residential Address (street only)

Does the proposer have a “permanent place of business” in Connecticut, as defined above?

________ Yes ________ No

If yes, please state the full street address (not a post office box) of that “permanent place of business.”

________________________________________________________________________

*************************************************************************

Sign on the next page
Proposer’s Full Legal Name

(print)
Name and Title of Proposer’s Authorized Representative

(signature)
Proposer’s Representative, Duly Authorized

Date

END OF LEGAL STATUS DISCLOSURE FORM
TOWN OF CHESHIRE, CONNECTICUT

Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26

PROPOSER’S CERTIFICATION
Concerning Equal Employment Opportunities
And Affirmative Action Policy

I/we, the proposer, certify that:

1) I/we are in compliance with the equal opportunity clause as set forth in Connecticut state law (Executive Order No. Three, http://www.cslib.org/exeorder3.htm).

2) I/we do not maintain segregated facilities.

3) I/we have filed all required employer's information reports.

4) I/we have developed and maintain written affirmative action programs.

5) I/we list job openings with federal and state employment services.

6) I/we attempt to employ and advance in employment qualified handicapped individuals.

7) I/we are in compliance with the Americans with Disabilities Act.

8) I/we (check one):
   _____ have an Affirmative Action Program, or
   _____ employ 10 people or fewer.

_________________________________________  ____________________________ ________
Legal Name of Proposer                  (signature)
Proposer’s Representative, Duly Authorized

_________________________________________
Name of Proposer’s Authorized Representative

_________________________________________
Title of Proposer’s Authorized Representative

______________________________
Date
TOWN OF CHESHIRE, CONNECTICUT

PROPOSER’S NON COLLUSION AFFIDAVIT

PROPOSAL FOR: Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26

The undersigned proposer, having fully informed himself/herself/itself regarding the accuracy of the statements made herein, certifies that:

(1) the proposal is genuine; it is not a collusive or sham proposal;
(2) the proposer developed the proposal independently and submitted it without collusion with, and without any agreement, understanding, communication or planned common course of action with, any other person or entity designed to limit independent competition;
(3) the proposer, its employees and agents have not communicated the contents of the proposal to any person not an employee or agent of the proposer and will not communicate the proposal to any such person prior to the official opening of the proposal; and
(4) no elected or appointed official or other officer or employee of the Town of Cheshire is directly or indirectly interested in the proposer’s proposal, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

The undersigned proposer further certifies that this affidavit is executed for the purpose of inducing the Town of Cheshire to consider its proposal and make an award in accordance therewith.

_________________________________  _____________________________________
Legal Name of Proposer      (signature)
Proposer’s Representative, Duly Authorized

_____________________________________
Name of Proposer’s Authorized Representative

_____________________________________
Title of Proposer’s Authorized Representative

_____________________________________
Date

Subscribed and sworn to before me this _______ day of _________________, 20__.

_____________________________________
Notary Public
My Commission Expires:
TOWN OF CHESHIRE, CONNECTICUT

Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26

PROPOSER'S STATEMENT OF REFERENCES

Provide at least three (3) references:

1. BUSINESS NAME________________________________________________________
   ADDRESS______________________________________________________________
   CITY, STATE___________________________________________________________
   TELEPHONE:____________________________________________________________
   INDIVIDUAL CONTACT NAME AND POSITION
          _________________________________________________________________
                                                                                   
2. BUSINESS NAME__________________________________________________________
   ADDRESS______________________________________________________________
   CITY, STATE___________________________________________________________
   TELEPHONE:____________________________________________________________
   INDIVIDUAL CONTACT NAME AND POSITION
          _________________________________________________________________
                                                                                   
3. BUSINESS NAME__________________________________________________________
   ADDRESS______________________________________________________________
   CITY, STATE___________________________________________________________
   TELEPHONE:____________________________________________________________
   INDIVIDUAL CONTACT NAME AND POSITION
          _________________________________________________________________
                                                                                   
END OF STATEMENT OF REFERENCES
CONTRACT FOR Remediation of Former Ball and Socket Manufacturing

PROPOSAL #1819-26

This Contract is made as of the ____ day of ____ 2019 (the “Effective Date”), by and between the Town of Cheshire, 84 South Main Street, Cheshire, Connecticut, a municipal corporation organized and existing under the laws of the State of Connecticut (the “Town”), and ______________________________________ (the “Contracting Party”).

RECITALS:

WHEREAS, the Town has issued a Request for Proposals for PROJECT (the “RFP”), a copy of which, along with any addenda, is attached as Exhibit A;

WHEREAS, the Contracting Party submitted a proposal to the Town dated June 6, 2019 (the “Proposal”), a copy of which is attached as Exhibit B;

WHEREAS, the Town has selected the Contracting Party to perform the Work (as defined in Section 1 below); and

WHEREAS, the Town and the Contracting Party desire to enter into a formal contract for the performance of the Work.

NOW THEREFORE, in consideration of the recitals set forth above and the parties’ mutual promises and obligations contained below, the parties agree as follows:

1. Work: The Contracting Party agrees to perform the Work described more fully in the attached Exhibits A and B (collectively, the “Work”).

The Contracting Party also agrees to comply with all of the terms and conditions set forth herein and in the RFP, including but not only all of the terms set forth in Section 26 (the “Contract Terms”) of the Standard Instructions to Bidders.

2. Term: One hundred twenty (120) days

3. Contract Includes Exhibits; Order of Construction: The Contract includes the RFP (Exhibit A) and the Proposal (Exhibit B), which are made a part hereof. In the event of a conflict or inconsistency between or among this document, the RFP, and the Proposal, this document shall have the highest priority, the RFP the second priority, and the Proposal the third priority.

4. Price and Payment: Right to Terminate – If the Contracting Party’s fails to comply with any of the terms, provisions or conditions of the Contract, including the exhibits, the Town shall have the right, in addition to all other available remedies, to declare the Contract in default and, therefore, to terminate it and to resubmit the subject matter of the Contract to further public procurement. In that event, the Contracting Party shall pay the Town, as liquidated damages, the amount of any excess of the price of the new contract over the Contract price provided for herein,
plus any legal or other costs or expenses incurred by the Town in terminating this Contract and securing a new contracting party.

5. **No Waiver or Estoppel** – Either party’s failure to insist upon the strict performance by the other of any of the terms, provisions and conditions of the Contract shall not be a waiver or create an estoppel. Notwithstanding any such failure, each party shall have the right thereafter to insist upon the other party’s strict performance, and neither party shall be relieved of such obligation because of the other party’s failure to comply with or otherwise to enforce or to seek to enforce any of the terms, provisions and conditions hereof.

6. **Notice** – Any notices provided for hereunder shall be given to the parties in writing (which may be hardcopy, facsimile, or e-mail) at their respective addresses set forth below:

If to the Town:

*Mr. Walter J. Gancarz, P.E.*

*Cheshire Town hall, Room 213*

*84 South Main Street*

*Cheshire, CT 06410* [wgancarz@cheshirect.org 203-272-6659(FAX)]

If to the Contracting Party:

**Execution** - This Contract may be executed in one or more counterparts, each of which shall be considered an original instrument, but all of which shall be considered one and the same agreement, and shall become binding when one or more counterparts have been signed by each of the parties hereto and delivered (including delivery by facsimile) to each of the parties.

IN WITNESS THEREOF, the parties have executed this contract as of the last date signed below.

---

TOWN OF CHESHIRE

By ______________________________

Sean A.Kimball

Its Town Manager, Duly Authorized

Date: ______________________________

[CONTRACTING PARTY LEGAL NAME]
By ______________________________________
Contractor

Its____________, Duly Authorized
Date:____________________________
SECTION 01 10 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

B. The intention of this summary is to enforce all requirements; either specified or implied, which are outlined in the all Work Plans included in the Contract Documents of this Bid Package.

Work Plans included in this Bid Package includes the report, by Fuss & O’Neill, and plans entitled.

1.02 REQUIREMENTS INCLUDED

A. Work under this Contract.

B. Examination of site and documents.

C. Contractor qualifications.

D. Contract method.

E. Work sequence.

F. Supervision of Work.

G. Contractor use of premises.

H. Coordination.

I. Field engineering.

J. Reference standards.

K. Pre-Award conference.

L. Project meetings.

M. Permits, inspection, and testing required by governing authorities.

N. Existing Utilities

O. Debris Removal
P. Safety regulations.

Q. OSHA safety and health course documentation.

R. Damage responsibility.

S. Special requirements.

T. List of Drawings.

1.03 WORK UNDER THIS CONTRACT

A. In general and without limitation, the work to be performed under this Contract the remediation of lead painted surfaces, asbestos removal and disposal, and removal and disposal of other hazardous material

B. The scope of work, without limiting the generality thereof, includes all labor, materials, equipment and services required to perform the work described fully in the Drawings and Specifications and includes, but is not limited to the following major work:

1. Applying for, paying for, and securing any and all permits required from local, state, and federal agencies, and other authorities having jurisdiction over excavation on the Site, including submitting, revising, and re-submitting all required plans, permits, and notifications.

2. Mobilizing to the project site.

3. .

4. Protecting existing public utilities within the surrounding work area and portions of site utilities to remain, including but not limited to the drainage and sewer systems.

5. .

6. Any activities which alter surface treatments and/or subsurface materials are to be restored to their original condition to the satisfaction of the Owner and Engineer.

7. Properly closing sidewalks and road lanes as necessary to maintain safe conditions during site activities.

8. Providing the required waste disposal documentation.

9. Decontamination of all equipment and materials, as described in the Project Specifications.

10. Stabilization of the site areas impacted by the work.

11. Demobilizing from the project site.

C. Reference to Drawings: The work to be done under this Contract is shown on the Drawings listed at the end of this Section.

D. The Contractor will provide a schedule for completion of the project to the Owner a minimum of three weeks prior to the start of work.

E. Wage rates issued by the State of Connecticut.
1.04 EXAMINATION OF SITE AND DOCUMENTS

A. A pre-bid conference will be held at the job site on the date and at the time indicated in the Invitation to Bid.

B. Contact:
Walter Gancarz PE Town Engineer
Town of Cheshire, Room 213
84 So. Main St
Cheshire, CT 06410
(203) 271-6652

1.05 CONTRACTOR QUALIFICATION

A. The Contractor shall certify in writing that she/he has successfully performed on at least three comparable remediation projects within the last 5 years within Environmental Protection Agency (EPA) Region I. Check against F&O

1.06 CONTRACT METHOD

A. Work under this contract shall be lump sum and unit prices, for the scope of work described in these Specifications and shown on the Drawings.

1.07 WORK SEQUENCE

A. The Work will generally be conducted in the following sequence:

The Contractor shall submit a project schedule to the Engineer for approval no later than fourteen calendar days after the issuance of the Notice To Proceed.

B. The Engineer reserves the right to request changes to the proposed sequence of work after review of the Schedule and Work Plan.

1.08 SUPERVISION OF WORK

A. The Contractor shall be held directly responsible for the correct execution of all work performed under this Contract. The Contractor must make good repair of any part of adjacent facilities and premises to remain, which are damaged on account of leaving the work area unprotected or unsupervised during demolition.

B. The Contractor shall furnish a competent superintendent satisfactory to the Engineer. The superintendent shall supervise all work under this contract and who shall remain on duty at the site throughout the Contract period while work is in progress.

1.09 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated on the Drawing(s). Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the
areas in which the Work is indicated.

B. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to emergency vehicles at all times. Do not use these areas for parking or storage of materials.

C. The Contractor shall be aware of the sensitivity of the neighborhood organizations to noise, lighting, dust, debris, and site maintenance and take appropriate precautions to avoid conflict.

D. Damage to existing work, if caused by the Contractor’s operations under this Contract, shall be repaired at the Contractor’s expense.

E. The Contractor can gain access to the premises during the hours of 7am to 5 pm. In addition the Contractor and her/his personnel will limit themselves only within the working premises during working hours. If work needs to be scheduled during times other than those listed below, Contractor shall inform the Engineer one week prior to work.

F. Confine operations at the site to areas permitted by:
   1. Laws
   2. Ordinances
   3. Permits
   4. Contract Documents
   5. Engineer’s Requirements

1.10 COORDINATION

A. The General Contractor shall be responsible for the coordination of the operations of all trades, subcontractors or material and people engaged upon the work.

   1. Examine Contract Documents in advance of start of construction and identify in writing questions, irregularities or interference to the Engineer in writing. Failure to identify and address such issues in advance becomes the sole responsibility of the Contractor.

B. Execute the work in an orderly and careful manner with due regard to the occupants of adjacent facilities, the public, and the employees.

C. The work sequence shall follow planning and schedule established by the Contractor as approved by the Engineer. The work upon the site of the project shall commence promptly and be executed with full simultaneous progress.

D. Contractor must supply to the Engineer the telephone number of a responsible person who may be contacted during off-hours for emergencies 24 hours a day, seven days a week, with a maximum response time of four (4) hours to site emergencies.

E. The Contractor shall coordinate and execute their work specifically to meet the requirements of the Connecticut Department of Energy & Environmental Protection and other authorities with jurisdiction. This includes, but is not limited to polluted urban fill removal and disposal, and site work.

F. The Contractor shall coordinate and execute the work to meet all of the requirements of the Cheshire
Fire Department regarding fire service, fire lanes, and all other fire safety issues.

1.11

1.12 REFERENCE STANDARDS

A. For products specified by association or trade standards, comply with requirements for the standard, except where more rigid requirements are specified or are required by codes.

B. Where reference is made in the Contractual Documents to Publications and Standards issued by Associations or Societies, the intent shall be understood to specify the current edition of such Publications or Standards (including tentative revision) in effect on the date of the contract advertisement notwithstanding any reference to a particular date.
1.13  PRE-AWARD CONFERENCE

A. A pre-award conference to review the work will be conducted by the Engineer.

B. Representatives of the following shall be required to attend this conference:

1. Owner
2. Engineer
3. General Contractor
4. All Subcontractors
5. Applicable State, Federal and Municipal Agencies

C. The Contractor shall have a responsible representative at the pre-award conference to be called by the Engineer prior to the award of the contract, as well as representatives of field or office forces and major subcontractors. All such representatives shall have authority to act for their respective firms. The pre-award conference is to be held within five days of Notice to Proceed, or as otherwise determined by the Engineer.

1.14  PROJECT MEETINGS

A. Project meetings shall be held as required subject to the discretion of the Engineer.

B. As a prerequisite for monthly payments, ordering schedules, shop drawing submitted schedules, and coordination meeting schedules shall be prepared and maintained by the Contractor and shall be revised and updated on a monthly basis, and a copy shall be submitted to the Engineer.

C. Scheduling shall be discussed with all concerned parties, and methods shall be presented by the Contractor which shall reflect demolition completion not being deferred or foreshortened. Identify critical long-lead items and other special scheduling requirements. The project schedule is to include time for submission of shop drawing submittals, time for review, and allowance for resubmittal and review.

D. Project meetings shall be chaired by the Engineer.

E. Minutes of the project meetings shall be prepared by the Engineer and shall be distributed to all present. The Engineer’s meeting minutes shall be the only official meeting record.

1.15  PERMITS, INSPECTION AND TESTING REQUIRED BY GOVERNING AUTHORITIES

A. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having any jurisdiction require any portion of the Work to be inspected, tested, or approved, the Contractor shall give the Engineer and such Authority timely notice (5 business days minimum) of its readiness so the Engineer may observe such inspecting, testing, or approval.

B. The Contractor shall prepare the necessary applications and submit required plans and documents to obtain such permits in a timely manner, and shall furnish the required information to the appropriate officials and obtain the required permits as early as practicable after award of the Contract. Such Permits and Notifications shall be displayed in a conspicuous location at the project site. The costs for permits, applications, and the like are to be paid for by the Contractor.
1. The Contractor shall display all permit cards as required by the Authorities, and shall deliver legible photocopies of all permits to the Engineer promptly upon their receipt.

2. The Contractor shall arrange for and document all inspections, testing and approvals required for all permits, and shall notify the Engineer of such inspections at least three (3) business days in advance (longer if so required in the various Sections of the Specifications), so they may arrange to observe.

3. The Contractor shall comply with all conditions and provide all notices required by all permits.

4. The Contractor shall perform and/or arrange for and pay all testing and inspections required by the Governing Codes and Authorities, other than those provided by the Engineer, and shall notify the Engineer of such inspections at least three (3) business days in advance of all such testing or inspection, so they may arrange to observe.

5. Where Inspecting Authorities require corrective work for conformance with applicable Codes and Authorities, the Contractor shall promptly comply with such requirements, except in cases where such requirements clearly exceed the requirements of the Contract Documents, in which case the Contractor shall proceed in accordance with the procedures for modifications or changes in the work established in the Contract Documents, as amended.

C. Unless otherwise specified under the Sections of the Specifications, the Contractor shall pay such proper and legal fees to public officers and others as may be necessary for the due and faithful performance of the work and which may arise incidental to the fulfilling of this Contract. As such, all fees, charges, and assessments in connection with the above shall be paid by the Contractor.

D. The Contractor shall maintain at the site at least two (2) up-to-date copies of all relevant codes and standards listed in the Contract Documents or determined to be applicable to the work. One (1) copy of such codes shall be for the exclusive use of the Engineer and its Consultants, and the other shall be kept in the Contractor’s site office.

E. The Contractor shall conform to all conditions and requirements of the permit and code enforcement authority. The Contractor shall provide names and license numbers of its responsible representatives to complete the application for permit, and shall receive the permit and promptly distribute copies to the Engineer.

F. Contractor and specialized subcontractors as applicable shall identify all permits required from authorities having jurisdiction over the Project for the construction and occupancy of the work. The Contractor shall prepare the necessary applications and submit required plans and documents to obtain such permits in a timely manner, and shall furnish the required information to obtain the required permits as early as practicable after award of the Contract.

1.16 EXISTING UTILITIES

A. The Contractor shall locate and record on Drawings all encountered existing utilities along the course of the work by such means as the Engineer and the Owner may approve, and shall preserve such marked locations until the work has progressed to the point where the encountered utility is fully exposed and protected as required. It shall be the Contractor’s responsibility to notify the proper authorities and/or utility company before interfering therewith.
Existing utilities that are indicated on the Drawings or whose locations are made known to the Contractor prior to excavations, though accuracy and information as to grades and elevations may be lacking, shall be protected from damage during the excavation and backfilling operations and, if damaged by the Contractor, it shall be repaired by the Contractor at his/her own expense.

All exposed conduits, wires, and/or cables shall be provided with sufficient protection and support to prevent failure, fraying, or damage due to backfilling or other demolition operations.

The Contractor shall not obstruct access to existing active utility system manholes and catch basins which continue to serve facilities other than the project excavation site. The Contractor shall exercise measures as necessary to prevent the placement of impediments that limit continuous access by authorized utility company or User Agency maintenance personnel and shall be required to reimburse the utility company or User Agency for any expense incurred as a result of need to remove any such impediments to access.

In the event an active utility line is encountered, which is not indicated on the Drawings, immediately notify the utility company and the Engineer of the exact location, size, and type of utility line encountered. Such utility line, if damaged, shall be immediately repaired, inspected by the utility company, protected, and maintained in use by the Contractor. If the Engineer determines that such line be relocated, abandoned, cut, and capped, or otherwise altered, the Contractor shall consult the utility company and perform required work.

B. If required, the Contractor shall notify and coordinate with the applicable agencies with regard to cutting and capping the water, sanitary sewer, and storm sewer lines running through the subject property. The Contractor shall also coordinate with the applicable agencies to gain access to water on site.

C. The Contractor shall notify Call Before You Dig Connecticut, “no cuts” of contemplated excavation in public or private ways, and any utility company right-of-way easement. Notification must be made at least three full working days prior to the work, but not more than ten (10) days, excluding holidays and weekends, before the contemplated work.

D. Utility marks are valid for 15 calendar days, when a renewal notice is required.

E. A ground-penetrating radar (GPR) service provider may also be utilized to perform a subsurface survey throughout target work areas in order to identify historic inactive utilities and/or unknown obstructions.

F. Wait the required amount of time for affected utility operators to respond to your request.

G. Confirm that all affected utility operators have responded to your request and marked underground utilities.

The Contractor shall designate the work area with white paint, white flags, or white tipped stakes.

1.17 DEBRIS REMOVAL

A. The Contractor shall remove all debris generated by his activities from the job site on a daily basis or as feasible. Waste shall be segregated for recycling.
B. Debris shall be legally disposed of in a CT DEEP approved disposal site. Contractor shall submit receipts from the disposal site(s) as evidence of legal disposal. Contractor shall pay the cost of any charges for debris removal.

C. The Contractor shall bear responsibility for maintaining the site clean and free of debris, leaving all work in clean and proper condition satisfactory to the Owner and the Engineer. The Contractor shall ensure that each of the Subcontractors clean up during and immediately upon completion of their work. Clean up includes the following tasks:

1. Remove all rubbish, waste, tools, equipment, appurtenances caused by and used in the execution of work.

D. Prevent the accumulation of debris at the excavation site, storage areas, parking areas, and along access roads and haul routes.

E. Provide containers for deposit of debris and schedule periodic collection and disposal of debris.

F. Prohibit overloading of trucks to prevent spillage on access and haul routes.

G. The Contractor shall be responsible for proper disposal of all debris leaving the site.

1.19 SAFETY REGULATIONS

A. This project is subject to compliance with Public Law 91-596 "Occupational Safety and Health Act" - latest edition (OSHA 29 CFR 1926), OSHA 1910.120 and OSHA 40 hour (HAZWOPPER), with respect to all rules and regulations pertaining to construction and demolition, including Volume 36, numbers 75 and 105, of the Federal Register, as amended, and as published by the U.S. Department of Labor.

B. Submit the name of the Contractor's safety officer to the Engineer.

C. All accident reports are to be transmitted to the Engineer within 24 hours of occurrence.

1.20 OSHA SAFETY AND HEALTH COURSE DOCUMENTATION

A. OSHA Safety and Health Course Documentation Records: Everyone employed at the jobsite must complete a minimum 10-hour long course in construction safety and health approved by the U.S. Occupational Safety and Health Administration (OSHA) prior to working at the jobsite. Compliance is required of contractors’ and subcontractors’ on-site employees at all levels whether stationed in the trailer or working in the field.

B. Documentation records shall be initially compiled by the Contractor and Subcontractors as part of their certified payrolls, and the Contractor shall create and maintain a copy of the documentation on site at all times. On-site documentation shall be filed in alphabetical order and immediately available to the Owner and OSHA inspectors. Fines imposed for non-compliance shall be promptly paid by the Contractor at no additional expense to the Owner. Delays in the progress of the Work caused by such non-compliance will not be acceptable as the basis for an extension of contract time or change order request.
1.21 DAMAGE RESPONSIBILITY

A. The Contractor shall repair, at no cost to the Owner, any damage to site and off-site appurtenances, landscaping, utilities, etc. caused during demolition operation and work of this Contract.

1.22 SPECIAL REQUIREMENTS

A. The Contractor shall prepare a Project-specific Health and Safety Plan that addresses protection of employee and public health and safety. The minimum contents of the Plan are specified in Section 02-21 16 Environmental Health and Safety.

B. The Contractor shall be solely responsible for implementing the procedures specified in the Plan.

C. The Contractor shall make available complete sets of personal protective equipment and clothing to the Owner for use during site observations/inspections by the Owner and the Engineer. These shall be supplied and maintained at no cost to the Owner and the Engineer, and shall be returned to the Contractor upon the completion of work, except for disposable protective clothing.

1. The Contractor shall provide a repository for collection and disposal of health and safety materials. Collection and disposal of contaminated disposable supplies shall be at no additional cost.


1.24 LIST OF DRAWINGS

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<tr>
<th>Sheet No.</th>
<th>Sheet Title</th>
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<tbody>
<tr>
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<td>Site Plan</td>
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<tr>
<td>HM- 01</td>
<td>Hazardous Materials Abatement Plan</td>
</tr>
<tr>
<td>A-1</td>
<td>Architect Siding Plan</td>
</tr>
</tbody>
</table>

PART 2 – PRODUCTS
Not Used

PART 3 – EXECUTION
Not Used

END OF SECTION
SECTION 01 22 00 – UNIT PRICES

PART 1 – GENERAL

1.1 SUMMARY

A. A unit price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the project Scope of Work is altered.

B. Unit prices include material, any direct or indirect expenses of the Contractor or Sub-Contractor, profit, insurance, bonding, and any applicable taxes. The same unit price shall apply whether the work is added or deducted.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

A. Unit Prices in accordance with the following schedule will apply to this Contract.

  Item No. 1 – MINI CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT (up to 100 SF of material removal)
  $ ______________________ per containment

  Item No. 2 – SMALL CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT (>100-250 SF of material removal)
  $ ______________________ per containment

  Item No. 3 – MEDIUM CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT (>250-750 SF of material removal)
  $ ______________________ per containment

  Item No. 4 – LARGE CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT (>750-2,500 SF of material removal)
  $ ______________________ per containment

  Item No. 5 – ASBESTOS FLOOR TILE AND MASTIC REMOVAL AND DISPOSAL AS ACM
  $ ______________________ per square foot
Item No. 6 – BOILER AND ASSOCIATED COMPONENTS DISMANTLING AND CLEANING AND THE REMOVAL AND DISPOSAL OF MATERIALS (WITH THE EXCEPTION OF MICA) AS ACM

$ ___________________________ per unit

Item No. 7 – ASBESTOS MUDDED PIPE FITTING INSULATION REMOVAL AND DISPOSAL AS ACM

$ ___________________________ per fitting

Item No. 8 – ASBESTOS MUDDED PIPE FITTING INSULATION REMOVAL AND DISPOSAL AS ACM VIA GLOVE BAG

$ ___________________________ per glove bag

Item No. 9 – ASBESTOS PIPE INSULATION REMOVAL AND DISPOSAL AS ACM

$ ___________________________ per linear foot

Item No. 10 – ASBESTOS PIPE INSULATION REMOVAL AND DISPOSAL AS ACM

$ ___________________________ per glove bag

Item No. 11 – ASBESTOS DUCT INSULATION REMOVAL AND DISPOSAL AS ACM

$ ___________________________ per square foot

Item No. 12 – INTERIOR ASBESTOS CEILING DECK PAPER REMOVAL AND DISPOSAL AS ACM

$ ___________________________ per square foot

Item No. 13 – MINI WORK AREA PREPARATION TO REMOVE LEAD PAINT (up to 100 SF of material removal)

$ ___________________________ per containment

Item No. 14 – SMALL WORK AREA PREPARATION TO REMOVE LEAD PAINT (>100-250 SF of material removal)

$ ___________________________ per containment

Item No. 15 – MEDIUM WORK AREA PREPARATION TO REMOVE LEAD PAINT (>250-750 SF of material removal)

$ ___________________________ per containment

Item No. 16 – LARGE WORK AREA PREPARATION TO REMOVE LEAD PAINT (>750-2,500 SF of material removal)

$ ___________________________ per containment
Item No. 17 – REMOVAL OF LOOSE AND FLAKING LEAD PAINT FROM BUILDING SURFACES

$ ____________________________ per square foot

Item No. 18 – REMOVAL OF LEAD PAINT FROM WOOD CLAPBOARDS

$ ____________________________ per square foot

Item No. 19 – LARGE WORK AREA PREPARATION TO REMOVE BIRD, BAT AND RODENT DROPPINGS (>750-2,500 SF of material removal)

$ ____________________________ per containment

Item No. 20 – BIRD, BAT AND RODENT DROPPINGS REMEDIATION AND DISPOSAL

$ ____________________________ per square foot

END OF SECTION 01 22 00
SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination and project conditions
B. Pre-construction meeting.
C. Progress meetings.

1.2 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various sections of the Project to ensure efficient and orderly sequence of installation of interdependent construction elements.
B. Verify utility clearance. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
C. Coordinate completion and clean-up of the Work Site.
D. After site restoration, coordinate access to site for correction of Work not in accordance with Contract Documents, to minimize disruption.

1.3 PRECONSTRUCTION MEETING

A. Engineer will schedule meeting after Notice of Award.
B. Attendance Required: Engineer and Contractor.
C. Agenda:
   1. Review the scope of work and services.
   2. Execution of Contract Agreement.
   3. Submission of executed bond and insurance certificates.
   5. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
   7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   8. Scheduling.
D. Record minutes and distribute electronic copies within two days after meeting to participants, with copies to Engineer.
1.4 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at the discretion of the Engineer.

B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, presiding at meetings.

C. Attendance Required: Job superintendent, major subcontractors and suppliers, Engineer, as appropriate to agenda topics for each meeting.

D. Agenda:
   1. Review minutes of previous meetings.
   2. Review of Work progress.
   3. Field observations, problems, and decisions.
   4. Identification of problems impeding planned progress.
   5. Review of submittals schedule and status of submittals.
   6. Review of off-site disposal and delivery schedules.
   7. Maintenance of progress schedule.
   8. Corrective measures to regain projected schedules.
   9. Planned progress during succeeding work period.
  10. Coordination of projected progress.
  11. Maintenance of quality and work standards.
  12. Effect of proposed changes on progress schedule and coordination.
  13. Other business relating to Work.

E. Record minutes and distribute electronic copies within two days after meeting to participants, with copies to Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.
B. Construction progress schedules.
C. Proposed products list.
D. Product data.
E. Shop drawings.
F. Samples.
G. Design data.
H. Test reports.
I. Certificates.
J. Manufacturer's instructions.
K. Manufacturer's field reports.
L. Erection drawings.
M. Construction photographs.

1.2 SUBMITTAL PROCEDURES

A. Transmit each submittal with Engineer accepted transmittal form. Provide sample to Engineer before first submittal for review and approval.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
E. Schedule submittals to expedite Project, and deliver to Engineer by email or to Engineer’s Office. Coordinate submission of related items.

F. For each submittal for review, allow 10 business days for review, excluding delivery time (if not email) to and from the Contractor.

G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

H. Allow space on submittals for Contractor and Engineer review stamps.

I. When revised for resubmission, identify changes made since previous submission.

J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

K. Submittals not requested will not be recognized or processed.

1.3 WORK PROGRESS SCHEDULES

A. Submit initial schedules within 15 business days after established in Notice to Proceed. After review, resubmit required revised data within ten business days.

B. Submit preliminary outline Schedules within 20 days after date of Notice to Proceed for coordination. After review, submit detailed schedules within 15 business days modified to accommodate revisions recommended by Engineer.

C. Submit revised Progress Schedules with each Application for Payment.

D. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.

E. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

F. Submit computer generated horizontal bar chart with separate line for each major portion of Work or operation identifying first work day of each week.

G. Show complete sequence of work by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.

H. Indicate estimated percentage of completion for each item of Work at each submission.

I. Submit separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and products identified under Allowances, and dates reviewed submittals will be required from Engineer. Indicate decision dates for selection of finishes.
J. Indicate delivery dates for Owner furnished products and products identified under Allowances.

K. Revisions To Schedules:
1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect [including effect of changes on schedules of separate contractors].

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

A. Product Data: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Submit number of copies Engineer will retain.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.6 SHOP DRAWINGS

A. Shop Drawings: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
   1. Include signed and sealed calculations to support design.
   2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
   3. Make revisions and provide additional information when required by authorities having jurisdiction.

C. Submittal shall be made by PDF file to the Engineer.

D. After review, produce copies and distribute.
1.7 SAMPLES
   A. Samples: If requested by Engineer, submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
   
   B. Samples For Selection as Specified in Product Sections:
      1. Submit to Engineer for aesthetic, color, or finish selection.

1.8 DESIGN DATA
   A. Submit for Engineer's knowledge as contract administrator.
   
   B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.9 TEST REPORTS
   A. Submit for Engineer's knowledge as contract administrator or for Owner.
   
   B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.10 CERTIFICATES
   A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
   
   B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   
   C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION
SECTION 01 35 43

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS that are hereby made a part of this Section of the Specifications.

1.2 SUMMARY

A. Furnishing all labor, materials, and equipment and perform all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of demolition operation under this Contract. For the purpose of this Section, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.

B. Schedule construction activities to minimize exposed area through phased construction/excavation.

C. The control of environmental pollution requires consideration of air, water, and land, and involves management of runoff, noise, and solid waste, as well as other pollutants. Work shall include installing, maintaining, and removing sedimentation and erosion control components within the Limits of Work.

D. This Section does not address dust control requirements which are addressed in Section 01 57-26 of these Specifications.

1.3 SECTION INCLUDES

A. Applicable Regulations

B. Notifications

C. Protection of Groundwater

D. Protection of Surface Waters

E. Protection of Land Resources

F. Protection of Air Quality

G. Noise Control
H. Diesel Equipment Emission Controls

I. Spill And Discharge Control

1.4 RELATED SECTIONS

A. Section 01 50 00 - Temporary Facilities and Controls

B. Section 01 57 26 – Dust Control

1.5 APPLICABLE REGULATIONS

A. The Contractor shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

B. Fines and related costs resulting from failure to provide adequate protection against any environmentally objectionable acts and corrective action to be taken are the obligations of the Contractor.

1.6 NOTIFICATIONS

A. The Engineer may notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements may notify the Contractor in writing, through the Engineer, of any non-compliance with Federal, State or local requirements. After receipt of such notice from the Engineer or from the regulatory agency through the Engineer, the Contractor shall immediately take corrective action. Such notice, when delivered to the Contractor or his/her authorized representative at the site of the Work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Engineer may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

PART 2 - PRODUCTS

2.1 WATER

A. Water used for dust control shall be clean and free of salt, oil, and other injurious materials. The Contractor shall provide all necessary water.

2.2 ON-SITE SPILL KIT

A. The Contractor shall provide the following minimum equipment to be kept onsite at all times during site work activities for any unexpected spills or discharges:

1. Sand, clean fill and absorbent pillows,
2. Four drums (55 gallon, U.S. DOT 17-E or 17-H), and shovels.

PART 3 - EXECUTION

3.1 PROTECTION OF GROUNDWATER

A. Care shall be taken to prevent, or reduce to a minimum, any discharges to the ground of liquids that may infiltrate to the underlying groundwater or enter on-site waterways. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the groundwater or waterway shall not be discharged from the Site. Such waters shall be collected and disposed of by the Contractor in accordance with all applicable Federal, State and local regulations.

3.2 PROTECTION OF SURFACE WATER

A. No surface waters shall be allowed to leave the site from target hot spots/excavation areas, or material staging areas, unless properly treated. Care shall be taken to prevent any damage to any surface water body or wetland from pollution by debris, sediment or other material. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in downstream waters of the State, shall not be discharged from the Site. Such waters shall be collected and disposed of by the Contractor in accordance with all applicable Federal, State and local regulations.

3.3 PROTECTION OF LAND RESOURCES

A. Land resources within the project boundaries and outside the limits of permanent work shall be restored to a condition, after completion of remediation activities that will appear to be natural and not detract from the appearance of the project. Confine all excavation activities to Limits of Work areas shown on the Drawings.

B. The locations of storage and other facilities, required in the performance of the Work, shall not be within wetlands or resource areas.

3.4 PROTECTION OF AIR QUALITY

A. Burning – The use of burning at the project site for the disposal of refuse and debris will not be permitted.

B. Dust Control – Maintain all excavations, stockpiles, waste areas, and all other work areas within or without the project boundaries free from dust per the requirements set forth in the contract documents. Also see Section 01 57-26 for specific Dust Control requirements.

C. The Contractor shall provide adequate means for the purpose of preventing dust and odor caused by demolition operations throughout the period of the demolition contract. If the Owner or the Engineer indicates that the level of dust or odors is unacceptable, the Contractor shall employ measures necessary to reduce dust or odors to an acceptable level.

D. The Engineer may conduct perimeter air monitoring to ensure that potential dust generation and contaminant migration is reduced during field operations and is not leaving the site.
3.5 NOISE CONTROL

A. The Contractor shall develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum. Local noise ordinances shall govern.

B. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Federal and State regulations.

3.6 SPILL AND DISCHARGE CONTROL

A. The Contractor shall provide equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. The collected spill material shall be properly disposed of at the Contractor's expense.

B. Costs to provide the above spill and discharge control materials shall be included in the contract base bid price.

END OF SECTION
SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

B.

C. Temporary Facilities and Controls will not be measured for payment; these costs shall be included in the overall cost to perform the excavation work under general conditions.

1.2 TEMPORARY WATER

A. All water for dust control and decontamination shall be furnished and paid for by the General Contractor, including all appurtenances, meters, etc.

B. Temporary hoses and temporary pipe lines used for transporting water shall not be run unattended or unprotected across parking areas, vehicle entrances, walkways, plazas, or steps.

C. The General Contractor shall provide an adequate supply of drinking water from approved sources of acceptable quality, satisfactorily cooled, for her/his employees and those of her/his Subcontractors.

D. Use of the water may be discontinued if, in the opinion of the Engineer, it is wastefully used.

1.3 STAGING

A. Construction of the Material Staging Area (MSA) shall be in accordance with the Contract Specifications and Drawings. The MSA shall be erected by the General Contractor and maintained in safe condition by her/him without charge to and for the use of all trades as needed by them for proper execution of their work, except where specified to the contrary in any Section of the Specifications.

1. The cost to provide, erect, maintain and dismantle the MSA will not be measured for payment. All costs should be included in the overall cost to perform the work.

1.4 MAINTENANCE OF ACCESS

A. The General Contractor shall provide and maintain for the duration of his contract, access to, around and within the site, as indicated on the Contract Drawings, for vehicular traffic and authorized personnel. This means of access shall be construed to sustain the weight of equipment customarily engaged for use in remediation projects of this type and magnitude. The General Contractor shall, without additional compensation from the Owner, furnish labor and
materials as may be required from time to time to maintain this means of access in an acceptable condition as determined by the Engineer.

1.5 VEHICULAR ACCESS

Access shall be limited to locations as indicated on the Contract Drawings or as directed by the Engineer.

Unimpeded access for emergency vehicles shall be provided. Contractor shall provide and maintain access to fire hydrants and free of obstructions.

Contractor shall provide decontamination and anti-tracking measures such that contaminants and mud are removed from vehicle wheels before entering streets. Related specification: 02 61-13 Excavation and Handling of Controlled Materials.

All vehicles on-site shall use only designated on-site roads.

On-site operations shall be conducted in a manner that minimizes the tracking of contaminated soil into non-impacted areas. Trucks transporting contaminated soil to the MSA must go through decontamination followed by use of anti-tracking pads.

All non-essential vehicles and equipment shall be prohibited from entering work areas.

1.6 TRAFFIC REGULATION

The Contractor may be required to post mounted traffic control and informational signs and provide traffic control in accordance with local ordinances. It shall be the Contractor’s responsibility to coordinate with the Town of Cheshire.

1.7 DUST CONTROL

A. The General Contractor shall provide adequate means for the purpose of preventing any fugitive dust caused by excavation activities from leaving the site, creating a hazard, nuisance, and from entering adjacent occupied areas throughout the period of the removal action contract. The Contractor shall provide to the Engineer a written Dust Control Plan describing what measure/controls that will be implemented for the work as described in Section 01 57 26 Dust Control.

B. This provision does not supersede any specific requirements for methods of the work or applicable general conditions set forth in the Contract Articles with added regard to performance obligations of the General Contractor.

1.8 NOISE CONTROL

A. Comply with requirements of authorities having jurisdiction. Develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum.
1.9 FIELD OFFICES
   A. The General Contractor is not required to provide or maintain temporary field offices.
   B. The General Contractor may provide a suitable field office on site for its own use. The location
      shall be at the discretion of the Engineer.

1.10 SANITARY FACILITIES
   A. The General Contractor shall provide suitable toilet facilities for its staff, the Owner and the
      Engineer, and additional facilities for the workmen on the job, including personnel of
      Sub-contractors.
   C. Provide chemical toilets where work is in progress and in quantity required by OSHA Code.
   D. Chemical toilets and their maintenance shall meet requirements of state and local health
      regulations and ordinances and shall be subject to the approval of the Engineer.

1.11 WORK ZONE BARRIERS
   A. Proper work zone barriers shall be provided around the contract work areas as defined by the
      Contract Drawings or as directed by the Engineer and Town of Montville.
   B. Site barriers, at a minimum shall include gates as shown in project Drawings, including
      temporary traffic control devices and signs. In addition excavation areas and material staging
      areas shall be covered when excavation activities are not actively taking place under the
      supervision of the Contractor (such as evenings and weekends) and provided with construction
      fencing.
   C. Barriers shall be erected at such approved locations as are necessary, sufficiently cross-braced
      and supported adequately.

1.12 PARKING
   A. Limited parking facilities located at the site will be available for use by the General Contractor,
      subcontractors and their employees. Such parking areas shall be designated by the Engineer.
      The Owner and Engineer shall not be responsible for cars, trucks, equipment, etc. or their
      contents and the General Contractor and his Subcontractors and material suppliers will use the
      designated area with this understanding. Need over all site plan and location

1.13 DEBRIS CONTROL AND REMOVAL
   A. Debris shall not be permitted to accumulate or migrate and the work shall at all times be kept
      satisfactorily clean. Facility trash receptors shall not be used for the disposal of debris.
      Dumpsters shall be provided by the General Contractor for removal of debris for all trades and
      activities including those performed by subcontractors.
   B. Remove debris from the work site on a daily basis and dispose of at any (private or public)
      approved dump that the General Contractor may choose providing that the General Contractor
shall make all arrangements and obtain all approvals and permits necessary from the owner or officials in charge of such dumps. Proposed dump site shall be submitted to be approved by the Engineer prior to start of excavation. During the disposal process, copies of daily receipts from dump site shall be submitted on a regular basis.

1.14 SAFETY PROTECTION

A. At no time shall the work be left unattended without proper safety protection and shall not be left unprotected to the weather and accessible to the public. It is the responsibility of the General Contractor to maintain proper safety protection for the public while work is in progress or unattended.

1.15 VEHICLE AND EQUIPMENT PROTECTION

All vehicles and equipment on site shall be effectively disabled and secured when not in use.

1.17 SECURITY CONTROL

Institutional controls will be established to protect the public from construction hazards and otherwise restrict access to the work area.

The property shall be maintained in a secure manner throughout all remediation and pavement work in order to prevent unauthorized access to work areas, site equipment, and waste material stockpiles.

The Contractor shall maintain log of workers and visitors, make available to Owner on request. Site Security may be hired by the Owner to monitor the site in the evenings and during times construction is not taking place.

1.18 END OF SECTION
SECTION 01 57 26

DUST CONTROL

1. GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Dust Control

B. Related Sections:
   1. Section 01 35 43 – Environmental Protection Procedures
   2. Section 01 50 00 – Temporary Facilities and Controls
   3. Section 02 21 16 – Environmental Health & Safety
   4. 

C. Related Work Plans:
   1. Remedial Action Report, dated
   2. Plans entitled,. 

1.02 UNIT PRICE - MEASUREMENT AND PAYMENT

D. Dust Control

   The work to control dust will be included in the Contract Lump Sump (L.S.) price for the contract. Such cost shall reflect all dust control activities, including that of subcontractors.

   1. The Contractor shall demonstrate to the Engineer monthly that Dust Control has been implemented including submittal of dust monitoring logs and records.

2. 

1.03 REFERENCES

A. The Standard Specifications for Roads, Bridges, and Incidental Construction, Form 816.
1.04 DEFINITIONS

A. "Dust" shall mean airborne particulate matter that is associated with or results from the Contractor's activities: Of particular concern is dust associated with the Contractor's excavation activities: truck traffic onto and off of the Site; loading and decontamination of transportation vehicles; and wind traversing exposed stockpiled soil and debris.

B. “Visible dust” shall mean dust that can be detected visibly, without instrumentation.

C. “Measurable dust” shall mean dust that can be directly measured through real-time monitoring devices employed by the Engineer or EPA.

E. “Dust Action Level” shall mean the real-time measurement of Measurable Dust at concentrations at or greater than 50 µg/m³.

1.05 SCOPE

A. Contractor shall implement dust control techniques at all times during work to prevent the formation and migration of dust and vapors during removal of debris at the Site. At a minimum, the following dust control techniques will include:

1. Thorough wetting of areas to be excavated for at least an hour before starting soil excavation and loading activities.
2. Providing and operating a sprinkler or mist system adjacent to excavation, and soil loading activities and adjacent to each piece of operating equipment expected to generate dust.
3. Designating personnel with watering hoses or other watering equipment to supplement sprinkler misting control techniques.
4. Limiting rate of excavation operations to meet the standards of this Section.

1.06 SYSTEM DESCRIPTION refer to tech specs

A. Furnish, install, test, operate, monitor, and maintain dust control system.

B. The Contractor shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate.

C. The Contractor shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum: an, photoionizer, and real-time aerosol monitors, depending on work activities and environmental conditions.

D. The Contractor’s AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring will be to determine if an upgrade (or downgrade) of PPE is required while performing on-site work and to implement engineering controls, protocols, or emergency procedures if Contractor-established action levels are encountered.

DUST CONTROL
01 57 26 - 2
F. The Contractor shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration of contamination to off-site receptors. Documentation monitoring shall include the collection and analysis of samples for total nuisance dust.

G. During the progress of active remedial work, the Contractor will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work site will be conducted on a continuous basis. Any departures from general background will be reported to the SO prior to entering the area. The SO will determine when and if operations should be shut down.

H. Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the Engineer’s on-site representative.

1.07 PERFORMANCE REQUIREMENTS

A. The Engineer shall develop and implement a dust control plan. The Contractor shall execute work by methods to minimize the generation of dust from all construction activities. Fugitive dust control strategies shall prevent dust from exiting the work zone, prevent visible emissions from exceeding air quality regulations, and prevent public nuisance and exposure to site contaminants.

B. The Contractor will be issued a temporary Stop Work Order, with no cause for delay or damages, and will re-assess Site activities and dust control measures, if:

1. Perimeter dust monitoring by either the Engineer indicate exceedances of the 50 µg/m³ Dust Action Level.
2. Visible dust is observed beyond the limits of the site.
3. If airborne action levels are exceeded at any time during soil remedial activities, as indicated by laboratory chemical specific analysis of perimeter samples until it is demonstrated that airborne action levels are achieved by the Contractor’s upgraded control measures.

C. The Contractor may make no claims for delays, no extension of contract time will be available, and no additional compensation will be paid due to the Contractor’s failure to meet dust control requirements.

D. The Contractor shall be responsible for the clean-up, remediation, and sampling of any off-site deposition of dust. The Contractor shall also be responsible for the cleaning of adjacent buildings, structures, windows and automobiles due to actions by the Contractor and his work. This cost shall be included in the general cost to perform the work.
1.08 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Shop Drawings: Signed and sealed by Professional Engineer Licensed in the State of Connecticut.

C. Dust Control Plan

Product Data: Submit data for each of the following:

D. Design Data: Signed and sealed by a Professional Engineer.

E. Field Reports: Test and monitoring reports as specified in Field Quality Control article.

1.09 QUALITY ASSURANCE

A. Comply with water disposal requirements of authorities having jurisdiction.

1.10 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.

2.00 EXECUTION

A. To control the formation of dust during excavation activities, the Contractor shall:

1. Keep vehicle speeds on the Site below 15 miles per hour.

4. 2.

4. Keep the drop heights to a minimum while loading transportation vehicles.

5. Cover all trucks and transport vehicles hauling soil, concrete, and other loose materials or require all trucks and transport vehicles to maintain at least 2 feet of freeboard.

2.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

2.02 REAL TIME MONITORING

A. Real-time air monitoring may be conducted by the Engineer. If Engineer-established action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.

B. In addition to perimeter monitoring, documentation samples will be collected on site. On-site
samples will be collected by choosing "high risk" workers to wear appropriate collection media for pesticides, metals, and particulates. "High risk" workers are those workers most likely to encounter contamination on a particular task.

2.03 DOCUMENTATION MONITORING

A. Documentation monitoring may be conducted by the Engineer at the perimeter of the (upwind and downwind) for total dust, metals, and particulates. Documentation monitoring will be conducted during excavation, staging, and removal activities.

B. Documentation samples will be collected at established perimeter locations. The locations will be chosen according to site activities and expected wind direction. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site.

C. Documentation samples will be collected at regularly scheduled intervals or at the initiation of a new phase of on-site work. Samples will be collected during the normal work hours when activities are occurring on site.

END OF SECTION
SECTION 016000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products.
B. Product delivery requirements.
C. Product storage and handling requirements.
D. Product options.
E. Product substitution procedures.
F. Equipment electrical characteristics and components.

1.2 PRODUCTS

A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products in accordance with manufacturer's instructions.
B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products in accordance with manufacturers' instructions.
B. Store with seals and labels intact and legible.
C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
D. For exterior storage of fabricated products, place on sloped supports above ground.

E. Provide off-site storage and protection when site does not permit on-site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with the following article.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION - Not Used

END OF SECTION
SECTION 017700

CONTRACT CLOSEOUT

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 FINAL CLEANING

A. Unless otherwise specified under the various Sections of the Specifications, the General Contractor shall perform final cleaning operations as herein specified prior to final inspection.

B. Maintain project site free from accumulations of waste, debris, and rubbish, caused by operations. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces.

C. Cleaning shall include all surfaces in which the General Contractor has had access whether existing or new.

D. Refer to other Sections of the Specifications for cleaning of specific products or work.

E. Use only those materials which will not create hazards to health or property and which will not damage surfaces.

F. Use only those cleaning materials and methods that are recommended by the manufacturer of surface material to be cleaned.

G. Employ experienced workmen, or professional cleaners, for final cleaning operations.

H. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed surfaces.

I. Broom clean exterior paved surfaces and rake clean other surfaces of the grounds.

J. Leave all architectural metals, hardware, and fixtures in undamaged polished conditions.

K. At the end of the project, General Contractor and each Subcontractor shall remove all his/her tools, equipment, machinery, and surplus materials from the job site. The General Contractor shall remove all waste materials and rubbish from the project at this time. All temporary structures shall be removed and the project shall be left clean.
1.4 CLOSEOUT REQUIREMENTS AND SUBMITTALS

A. Procedural Requirements Prior to Completion:

1. During the finishing stages of the project, the Contractor shall make frequent inspections with subcontractors, the Engineer, and the Owner, so as to progressively check for and correct faulty work.

2. When the Contractor determines that he/she is Substantially Complete*, he/she shall prepare for submission to the Engineer a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with contract Documents.

*NOTE: Substantially Complete means that less than one percent (1%) of all contract work, including change orders, remains to be done, and that none of the remaining work will affect health, safety, or function.

3. Upon receipt of the Contractor’s list of items to be completed or corrected, the Engineer will promptly make a thorough inspection, together with representatives of the Owner, and prepare a “punch list”, setting forth in accurate detail any items on the Contractor’s list and additional items that are not acceptable.

4. When the punch list has been prepared, the Engineer will arrange a meeting with the Contractor and subcontractors, and the Owner, to identify and explain all punch list items and answer questions on the Work that must be done before Final Acceptance.

5. The Contractor shall immediately correct all punch list items.

B. The Contractor shall ensure the completion of all of the other punch list items within the timeframe required by the Owner.

1. Record documents should be completed (both electronic files and transparencies) and ready to transfer over to the Owner. Record documents shall consist of, but not be limited to, the following:

   a) Drawings (in AutoCAD ver. 2000 or later format)
      1) Contract drawings, for all disciplines, marked-up to clearly indicate Record conditions.
      2) All clarification and/or changed conditions sketches (SK’s).

   b) Specifications (in .pdf format)
      1) All demolition specifications.
      2) All addenda.

2. If the Contractor fails to pursue completion of the remaining punch list work, on a continual basis, within the timeframe required by the certificate, the Owner may, after seven (7) calendar days written notice, elect to complete the work with separate forces and charge the work against the Contractor.

3. At the end of the Contractor’s one (1) year guarantee period, the Contractor shall transfer manufacturers’ equipment and material warranties that are still in force to the Owner.
1.5 GUARANTEES AND WARRANTIES

A. Submit to the Designer all extended guarantees and warranties that have been specified in various, individual Sections of the Specifications. Guarantees shall be assembled by Specification No. and Section in accordance with Specifications Table of Contents.

1. Guarantees and warranties shall be enforceable in the State of Connecticut and subject to interpretation in accordance with the laws of the State of Connecticut.

B. Unless more stringent requirements are otherwise specified, guarantee all work against defects of materials, equipment and workmanship for one year from the date of Completion.

C. If, within any guarantee period, repairs or changes are required in connection with guaranteed work, Contractor shall promptly upon receipt of notice from the Owner, and without additional expense to the Owner, within ten days:

1. Place in satisfactory condition in every particular all guaranteed work and correct all defects.

2. Correct all damage to adjacent buildings, site equipment, or contents thereof.

D. If the Contractor, after such notice, fails to proceed immediately to comply with terms of guarantee, the Owner may correct defects and hold Contractor liable for all expenses incurred.

E. Promptly after completion of the work, obtain from each subcontractor where a guarantee is required, a warranty addressed to and in favor of the Owner if directed by the Owner.

F. Delivery of any warranty required does not relieve the Contractor from any obligation assumed under other provisions of the Contract.

G. Guarantees and warrantees must be submitted to the Designer in order for the final payment to be issued.

H. The general warranty set forth in the General Conditions is in addition to, exclusive of, and not in substitution of such guarantees as may be required in the Specifications.

END OF SECTION
SECTION 01 73 29 – CUTTING AND PATCHING

PART 1 GENERAL

1.1 HISTORIC SIGNIFICANCE

A. The Ball & Socket Manufacturing Buildings are all considered significant historic structures and are listed on the CT Register of Historic Buildings. All work shall conform to National Park Service (NPS) standards and as such must be completed in such a way as to protect existing architectural features from damage and to retain as much historic fabric as possible.

1.2 SECTION INCLUDES

A. Requirements and limitations for cutting and patching of Work.
B. Products and installation for patching and extending Work.
C. Transition and adjustments.
D. Repair of damaged surfaces, finishes, and cleaning.

1.3 RELATED SECTIONS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 01 Specification Sections apply to this Section.
B. Section 01 74 13 – Progress Cleaning.

1.4 GENERAL

A. It is the responsibility of the Contractor to provide chases, channels or openings where needed to complete the work.
B. The Contractor shall install sleeves, inserts, and hangers furnished by the trades.
C. After installing work into openings, channels, and/or chases, the Contractor shall close same. If finishes are to be restored, the new work shall match the original and shall be done by the trade customarily responsible for the particular kind of work. If access is required to concealed work for maintenance or inspection, an appropriate access panel shall be installed as a part of the work.

1.5 SUBMITTALS

A. Submit written request in advance of cutting or alteration which affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
3. Efficiency, maintenance, or safety of any operational element.


5. Work of Owner or separate contractor.

B. Include in request:

1. Identification of Project.

2. Location and description of affected Work and date and time work will be executed

3. Necessity for cutting or alteration.

4. Description of proposed Work and Products to be used.

5. Alternatives to cutting and patching.

6. Effect on work of Owner or separate contractor.

7. Written permission of affected separate contractor.

PART 2 PRODUCTS

2.1 NEW MATERIALS

A. As specified in product sections or match existing Products and work for patching and extending work.

B. Provide appropriate access panels, approved by the Architect, in work where new concealed work must be accessed for periodic inspection or maintenance after construction.

2.2 EXISTING PRODUCTS

A. Reuse existing material to greatest extend possible.

B. If existing materials must be replaced, determine type and quality by inspecting and testing Products where necessary, referring to existing Work as a standard. Patching materials shall match exact.

PART 3 EXECUTION

3.1 PREPARATION

A. Verify that areas are ready for installation of new Work; beginning of restoration Work means acceptance of existing conditions.

B. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
C. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

D. Remove debris and abandoned items from area and from concealed spaces.

E. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.

F. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.2 PROCEDURES

A. Execute cutting, fitting, and patching to complete Work, and to fit parts together, to integrate with other Work, to uncover Work, to install or correct ill-timed Work, to remove and replace defective and non-conforming Work, to remove samples of installed Work for testing and to provide openings in elements of Work for penetrations of mechanical and electrical Work.

B. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

C. Cut masonry and concrete materials using masonry saw or core drill.

D. Restore Work with new Products in accordance with requirements of Contract Documents or to match adjacent products.

E. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

F. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

G. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections. Where a change of plane of 1/4 inch or more occurs, request instructions from Architect.

H. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance. When finish cannot be matched, refinish entire surface to nearest intersections.

I. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Architect for review.

J. Identify any hazardous substance or condition exposed during the Work to the Owner for decision or remedy.

END OF SECTION 01 73 29
SECTION 02 41 14.13 – REMOVAL AND SALVAGE OF CONSTRUCTION MATERIALS

PART 1 GENERAL

1.1 HISTORIC SIGNIFICANCE

A. The Ball & Socket Manufacturing Buildings are all considered significant historic structures and are listed on the CT Register of Historic Buildings. All work shall conform to National Park Service (NPS) standards and as such must be completed in such a way as to protect existing architectural features from damage and to retain as much historic fabric as possible.

1.2 SECTION INCLUDES

A. Demolition work shall include, but is not limited to the following:

1. Removal of the existing historic siding, underlayment, flashing, and decorative wood trim.

2. Removal of existing wall mounted fixtures and appurtenances.

3. Handling of, and storage of, removed materials.

4. Removal of the existing metal flashings and removal of lead flashings must be accomplished by workers who have completed OSHA Lead Training (4 hour course) in accordance with OSHA regulations 1926.62.

1.3 RELATED SECTIONS

A. Section 01 73 29 – Cutting and Patching

B. Section 02 83 19 – Lead Paint Awareness and Stabilization Plan

C. Section 06 20 50 – Exterior Finish Carpentry

D. Section 07 46 23 – Wood Siding

1.4 COORDINATION

A. It is the responsibility of the Contractor to coordinate the work of this section with all other work on the Project.

1.5 REGULATORY REQUIREMENTS

A. Conform to CT State Building Code for demolition work, dust control, products requiring electrical disconnection and re-connection.

B. Obtain required permits from authorities.

C. Do not close or obstruct egress width to any building or site exit.
D. Do not disable or disrupt building fire or life safety systems without prior written notice to Owner.

E. Investigate and comply with any rules or regulations relative to providing and paying for uniformed Police to regulate or control traffic on existing streets which are affected by the Contractor's operation.

F. Conform to procedures applicable when hazardous or contaminated materials are discovered.

G. Removal of the lead containing materials must be accomplished by workers who have completed OSHA Lead Training (4 HR course) in accordance with OSHA regulations 1926.62 and shall have and maintain current Connecticut EPA RRP Certification and Training.

H. The Contractor shall ensure personnel handling hazardous materials shall have the proper hazardous material/OSHA training. All personnel shall be equipped and dressed in OSHA approved garments when handling hazardous materials.

I. The Contractor shall notify DEEP/DPH prior to the removal and disposal of any hazardous building materials. All hazardous materials shall be disposed of in accordance with all governing local, State and Federal laws and regulations.

1.6 JOB CONDITIONS

A. The Contractor shall inspect the premises prior to the submittal of its bid for conditions which may affect its work.

B. Demolition, storage of materials, removal of debris and construction operations shall not interfere with the Owner's use of the property.

1.7 PERMITS

A. The Contractor shall obtain, at its expense, all permits required by governing authorities, including any required for disposal of demolition debris or for use or blockage of streets or sidewalks.

1.8 SEQUENCE OF OPERATIONS

A. The Contractor shall submit for approval the complete sequence of operations for demolition and show how this Work is coordinated with all other aspects of the Project. Work shall not begin until such a schedule has been approved in writing by the Town of Cheshire and the Owner (Ball & Socket Arts, Inc.).

B. The Contractor shall schedule a pre-construction meeting to review the procedures for the removal, handling, storage and transportation of all hazardous materials. The Contractor shall notify the personal assigned to remove the hazardous materials, the Owner, and the Architect of the time, date and location of the meeting.
1.9 SCHEDULING
   A. Schedule Work to coincide with other activities on the site.
   B. Describe demolition removal procedures and schedule in project kick-off meeting.
   C. Perform noisy, malodorous, and dusty work during hours designated by the Owner.

1.10 PROJECT CONDITIONS
   A. Conduct demolition to minimize interference with adjacent and occupied buildings.
   B. Cease operations immediately if the structure appears to be in danger and notify
      Architect/Engineer. Do not resume operations until directed.

PART 2 PRODUCTS
2.1 NOT USED

PART 3 EXECUTION
3.1 PROTECTION
   A. Before starting demolition, the Contractor shall be solely responsible for making the
      necessary arrangements and for performing the necessary work involved in connection with
      the discontinuance or interruption of public and private utilities or services or components of
      said utilities or services under the jurisdiction of the Owner, utility companies or
      corporations, Police Department, Fire Department and Public Works Department including
      but not limited to gas, electricity, telephone, police signal, fire alarm, water, sanitary sewer,
      storm drainage and other systems which will be affected by the work to be performed under
      this Contract.
   B. The Contractor shall preserve in operating condition active utilities traversing the work site
      and shall protect manholes, catch basins, valve boxes and other apparatus. He shall repair
      damage to any such utility, due to work under this Contract, to the satisfaction of the Owner
      or his authorized representatives.
   C. Adequate protection of persons and property shall be provided at all times. The work shall be
      executed in a manner to avoid interference with the use of adjacent buildings, areas or
      properties, and to avoid interruption of free passage to or from such buildings, areas or
      properties.
   D. Protect existing materials, utilities, equipment and other construction which are not to be
      demolished. Erect and maintain weatherproof closures for the existing building as necessary
      as siding materials are removed to protect the building interior from damage and to repel
      intruders.
   E. Prevent movement of the structure; provide engineered bracing and shoring as necessary.
F. Furnish signs, lights, barricades and other equipment as may be necessary for the safe execution of the work.

G. Hazardous Materials: In the event the Contractor finds any undocumented asbestos, PCBs or other hazardous materials which require abatement the Contractor shall stop work immediately and notify the Architect and Owners Representative.

3.2 DOCUMENTATION

A. Prior to removing any material from the building, the contractor shall perform a thorough photo-documentation of the existing building including close-up photographs of all details. Include a partially extended tape measure or ruler in all photographs for scale.

B. Photo-document and label all materials and objects being removed, or necessary to be removed, to execute the work of this and other sections including (but not limited to) doors, hardware, electrical devices, decorative trim, casings, etc.

C. Key Plan: Submit plans and elevations of the work area with the location and direction of each photograph and the corresponding label of each removed item clearly marked. The Architect will provide existing condition plans elevations in PDF format for use in the documentation process

D. Digital Photographs: Conform to the following:
   1. All pre-demolition photographs shall be digital and taken at a minimum sensor resolution of 8 megapixels.
   2. Format shall be 3200 by 2400 pixels in unaltered original JPG file format with the same aspect ratio as the sensor. Photos shall be uncropped, date and time stamped, and saved in a folder named by the date of the photograph and accompanied by the key plan file.

3.3 REMOVAL

A. Remove all temporary window coverings and discard.

B. Coordinate removal of window casing and trim with Owner’s window sash restoration contractor.

C. Remove any wall mounted electrical devices, electrical fixtures, trim pieces, wall mounted appurtenances, etc. that interfere with the application of new materials.

D. Remove by hand all existing siding in a systematic manner starting from the top of the wall using only hand tools in a manner so as to minimize damage to the siding.
   1. ALL removed siding shall be stockpiled in an on-site dry, enclosed area to be determined by the Owner prior to de-leading. Stockpiled material shall be “stickered” with 1” x 1” nominal furring spaced at 16-inch intervals.
   2. Siding boards shall be removed in complete pieces to the greatest extend possible.
3. Any fasteners remaining on removed siding boards shall be removed by hand from the reverse side of the siding to prevent damage to the siding face.

4. Broken and rotted siding (DISCARD) shall be segregated from siding in reusable condition.

E. Remove and discard the existing fasteners, flashings, membrane waterproofing system, membrane flashing and sheet metal as necessary to completely expose the existing structural wall sheathing. Carefully inspect and repair exposed surfaces, utilities, penetrations, etc., for damage and repair or replace as required.

F. Removal of siding system shall result in a smooth, consistent substrate for application of water-resistive barrier, insulation, nailers and new siding.

G. A thorough inspection of the existing substrate and adjoining materials shall be made to determine if any repairs are required. If conditions are uncovered or created that would be detrimental to the application of specified work, immediately notify the Owner's Representative of such conditions for determination of treatment.

H. All Hazardous materials once abated will be stored and removed from the site in accordance with all governing local, State and Federal laws and regulations.

I. Any lead coated copper, if not recycled, must be disposed of as hazardous material/construction debris in accordance with all applicable local, state and federal regulations.

J. Decorative wood trim shall be left in place to greatest extend possible. All decorative wood trim removed from the building shall be labeled and considered SALVAGE.

3.4 MATERIAL SALVAGE DETERMINATION

A. The Architect and, where applicable, a representative from the State Historic Preservation Office (SHPO) shall be the sole determiners of what siding materials are to be deemed DISCARD. All other material shall be assumed to be SALVAGE.

B. SALVAGE shall refer to any siding or trim materials deemed to be in reusable or repairable condition. SALVAGE materials shall be treated to remove hazardous materials (de-leaded) as specified in Section 02 83 19 – Lead Paint Awareness and Stabilization Plan and stockpiled in an on-site dry, enclosed area to be determined by the Owner after de-leading. Stockpiled material shall be “stickered” with 1” x 1” nominal furring spaced at 16 inch intervals.

C. DISCARD materials are those materials sufficiently damaged or decayed to prevent their repair, re-use, and reinstallation in the project. DISCARD materials shall be disposed of in a legal manner in full compliance with CT law and these specifications.

3.5 POLLUTION CONTROL

A. The Contractor shall be aware that neighboring buildings and businesses, and the linear trail will remain in use throughout the course of construction and that any disruption or inconvenience sustained by the Owner, employees, visitors and Tenants must be kept to an
absolute minimum. When necessary, the Contractor shall provide a water spray and impermeable barrier to minimize dust and debris infiltration. The Contractor shall also select equipment and procedures to mitigate noise discomfort.

3.6 ON-SITE STORAGE

A. Ground level storage areas, if available, will be provided for equipment and new materials. Size and location of area shall be coordinated with the Owner.

B. No debris or waste material shall be stored on or within the buildings. Debris shall be considered the property of the Contractor and shall be removed for the site in its entirety on a regular basis and be legally disposed. On site storage of discarded material will only be permitted when stored in a covered container within a secured fenced area.

3.7 REPAIR OF DAMAGES

A. The Contractor shall provide a list of damaged or deteriorated elements of adjacent buildings and adjacent site to the Owner prior to demolition and shall be responsible for repair or replacement of damaged or deteriorated items not on that list when the operations of the Contractor are substantially complete.

B. Damage to any portion of the existing adjacent buildings or site which results in disruption of or inconvenience to the Owner, employees or Tenants shall be immediately repaired or replaced by the Contractor. If such restitution is not promptly made, the Owner shall have the necessary work performed by an outside agency at the Contractor's expense. Such work shall be completed to the satisfaction of the Owner prior to the release of final payment.

3.8 ENVIRONMENTAL REQUIREMENTS

A. Do not apply new siding and/or insulation during inclement weather or when precipitation is expected. Demolition of existing siding must coincide with installation of new siding and the environmental requirements of demolition must coincide with those of all new materials.

B. Do not apply insulation or membrane to damp substrates or sheathing surfaces.

C. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weather-proofed during same day.

3.9 CLEAN-UP

A. The building and adjacent areas shall be left in a broom clean condition at the end of each day.

B. On completion of the work of this section and after removal of debris, the site shall be left in a clean and safe condition, satisfactory to the Owner or his authorized representative.

END OF SECTION 02 41 14.13
SECTION 06 01 20 – WOOD RESTORATION

PART 1  GENERAL

1.1  HISTORIC SIGNIFICANCE

A. The Ball & Socket Manufacturing Buildings are all considered significant historic structures and are listed on the CT Register of Historic Buildings. All work shall conform to National Park Service (NPS) standards and as such must be completed in such a way as to protect existing architectural features from damage and to retain as much historic fabric as possible.

1.2  SECTION INCLUDES

A. This section includes restoration of rotted, decayed, damaged or deteriorated wood with epoxy consolidants and wood replacement compound. It is the specific Intent of this Section that at completion of the Work, all Wood component structures shall be completely restored to mirror the original wood in appearance and operability.

B. Work includes removal of exterior finish at areas of wood restoration, application of borate wood preservative, application of epoxy consolidants, application of epoxy filler and restoration of wood profile.

C. Restored wood shall be capable of being sawn, planed, sanded, nailed with carpentry nails and otherwise worked like wood.

D. Restored wood shall retain paint and or stain.

E. Where wood replacement compound has been applied, the material shall form a permanent seamless bond with the wood.

1.3  RELATED SECTIONS

A. Section 02 41 14.13 – Removal and Salvage of Construction Materials

B. Section 06 10 00 – Rough Carpentry

C. Section 07 46 23 – Wood Siding

D. Section 07 90 00 – Joint Sealants

E. Section 09 91 13 – Painting

1.4  REFERENCES

A. Codes:

2. Comply with all applicable OSHA safety rules while performing work for this project.

1.5 SUBMITTALS
   A. Refer to Section 01 33 00 Submittal Procedures.
      1. Submit product brochure, technical data, manufacturer’s product and application
         instructions, Material Safety Data Sheets (MSDS), and Greenguard certifications.
      2. Verification Samples: Submit full size samples of repaired wood profiles using materials
         salvaged from the site.

1.6 ADMINISTRATIVE REQUIREMENTS
   A. Pre-installation meeting: Conduct a pre-installation meeting at the job site attended by
      Owner, Architect, Manufacturer’s Technical Representatives, Installer, and Contractors of
      related trades. Coordinate support requirements in relation to repair area, staging and work
      procedures, and other requirements specific to the project.

1.7 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Material manufacturers shall have a minimum of ten (10) years
      experience in the production specified products.
   B. Contractor Qualifications: Contractor must be experienced in the repair of historic based
      exterior wood work and trim. The contractor must have a minimum of five years experience
      on projects of similar historical significance.

1.8 DELIVERY, STORAGE AND HANDLING
   A. Store unused materials in tightly sealed containers between 55° and 85° F.
   B. Avoid contamination of component products by introducing any object which has been in
      contact with another product such as gloves or tools.
   C. Keep flammable solvents away from the products.

PART 2 PRODUCTS

2.1 MANUFACTURER
   A. Abatron, Inc. (basis of design)
   B. Requests for substitutions will be considered in accordance with provisions of Section
      01 25 00

2.2 MATERIALS
   A. Wood Preservative shall be “Bora-Care” boron-based concentrated wood preservative.
B. Wood Consolidant shall be “LiquidWood” low viscosity, two component, penetrating epoxy compound.

C. Wood Replacement Compound shall be “WoodEpox” light-weight, thixotropic epoxy adhesive.

D. Wood and Epoxy Primer shall be “Primkote 8006-1” penetrating primer for wood and epoxy surfaces.

2.3 RELATED PRODUCTS

A. “Abosolv”: Solvent for thinning LiquidWood and for clean-up.

B. “Abocure 7912-1”: Cold weather hardener for use with LiquidWood.

C. “Abocure 8512-1”: Cold weather hardener for WoodEpox.

D. Clearstrip: Biodegradable, nonflammable, very low odor paint removal chemical.

PART 3 EXECUTION

3.1 PREPARATION

A. Remove paint, dirt, wax, sealants and other debris from work area.

B. Wire brush loose wooden material from surfaces, or use a vacuum for complete cleanliness as necessary.

C. Remove hardware in the way of the repair and bag it for later restoration and reuse, identifying the component that it came from.

D. Protect adjacent surfaces from spills with masking tape and plastic sheeting.

E. If deterioration is more than superficial, drill small holes, approximately 1/8 inch in diameter, into areas to be consolidated being careful not to drill completely through the wood.

F. Apply wood preservative solution to the decayed wood and allow 48-72 hours to dry.

G. Prior to the application of the epoxy consolidant, test the moisture content of the wood for a moisture content of not more than 20%.

3.2 EPOXY CONSOLIDATION

A. Mix the two part consolidant according to the manufacturer’s instructions allowing sufficient time (5-10 minutes) for an induction period prior to application. Mix only an amount that will be used within 50 minutes. The pot life of the consolidant is approximately 30-50 minutes after which time the batch should be disposed of and another batch mixed where necessary.

B. Apply the consolidant according to the manufacturer’s instructions.

C. Where only the surface of the wood to be restored is rotted or deteriorated, the consolidant can be applied by brush. More than one application is recommended to thoroughly consolidate the wood.
D. Where deterioration extends beyond the surface of the wood, pour the consolidant directly into holes drilled into the wood using an applicator such as a plastic bottle with a narrow spout or a syringe. Wait for the consolidant to be absorbed into the wood. Follow with additional applications of consolidant until the wood is saturated and no more consolidant is absorbed.

E. Brush out the excess consolidants on the surface of the wood to insure thorough saturation of the wood surface.

3.3 WOOD REPLACEMENT COMPOUND APPLICATION:

A. Apply mixed wood replacement compound according to manufacturer’s instructions.

B. Apply wood replacement compound to areas which have been consolidated. Apply compound when consolidant is tacky and not completely hardened.

C. On wood that is sound and wood that has been previously consolidated, apply primer as specified to the wood and consolidated material prior to the application of the wood replacement compound.

D. Apply wood replacement compound by pressing into place, troweling, or pressing into a form. The repaired area should be slightly overfilled so that it can be sanded or planed after hardening. Apply additional compound if there are voids or depressions after smoothing.

E. After hardening for 12 hours or longer, the wood replacement compound can be sanded, or planed and carved to correspond to the contour of the surrounding wood.

F. After hardening 24 hours, paint as specified in Section 09 91 13.

G. Note: hardened consolidant and wood replacement compound should be tack-free and firm to the touch.

H. Protect all work from cold temperatures and moisture elements until all epoxy work has cured.

I. Following all applications of epoxy, leave all areas free and clean of epoxy. Discard unused epoxy, containers, tools and towels in accordance with local, state and federal regulations.

END OF SECTION 06 01 20
SECTION 06 20 50 – EXTERIOR FINISH CARPENTRY

PART 1  GENERAL

1.1  HISTORIC SIGNIFICANCE

A. The Ball & Socket Manufacturing Buildings are all considered significant historic structures and are listed on the CT Register of Historic Buildings. All work shall conform to National Park Service (NPS) standards and as such must be completed in such a way as to protect existing architectural features from damage and to retain as much historic fabric as possible.

1.2  SECTION INCLUDES

A. The work of this section consists of exterior finish carpentry where required to rebuild, restore and preserve the existing wood trim and moldings in a historically compatible manner.

B. The scope of work includes exterior mounted molding, trim and paneling.

1.3  RELATED SECTIONS

A. Section 06 10 00 – Rough Carpentry
B. Section 07 46 23 – Wood Siding
C. Section 07 90 00 – Joint Sealants
D. Section 09 91 13 – Painting

1.4  REFERENCES

A. Codes:


2. Comply with all applicable OSHA safety rules while performing work for this project.

B. Industry Standards

1. American Hardboard Association (AHA) A135.4-04 - Basic Hardboard.


4. American Wood-Preservers’ Association (AWPA) AWPA C1-03 – All Timber Products – Preservative Treatment by Pressure Processes.

6. FSC – Forest Stewardship Council Certification.

7. U.S. Department of Commerce PS 1-95 - Construction and Industrial Plywood.


1.5 SUBMITTALS

A. Refer to Section 01 33 00 Submittal Procedures.

1. Shop Drawings showing trim profiles, framing connection details, fasteners, connections and dimensions.
   a. Half full size scale for sections and details, 1/2 inch for elevations and plans.
   b. Show construction details and proposed installation methods.
   c. Show existing and proposed new conditions.

2. Verification Samples: Submit full size samples of trim profiles indicating exact match to existing.

3. Certificates:
   a. Indicating preservative treatment of materials meet the requirements specified.
   b. Indicating moisture content of materials meet the requirements specified.

1.6 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation meeting: Conduct a pre-installation meeting at the job site attended by Owner, Architect, Manufacturer’s Technical Representatives, Installer, and Contractors of related trades. Coordinate support requirements in relation to repair area, staging and work procedures, and other requirements specific to the project.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Material manufacturers shall have a minimum of ten (10) years experience in the production specified products.

B. Contractor Qualifications: Contractor must be experienced in the installation of historic based exterior woodwork and trim. The contractor must have a minimum of five years experience on projects of similar historical significance.

1.8 DELIVERY, STORAGE AND HANDLING

A. Protect lumber and other products from dampness both during and after delivery at site.
B. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.

C. Stack plywood and other board products so as to prevent warping.

D. Locate stacks on well drained areas, supported at least 6 inches above grade and cover with well ventilated sheds having firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

1.9 JOB CONDITIONS

A. Protect and cover all adjacent architectural features and work completed by other trades.

B. Verify that substrates are sound and free from defects affecting proper installation of wood framing.

1.10 WARRANTY

A. Material Warranty: Standard form in which manufacturer agrees to repair or replace items that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two (2) years from date of Substantial Completion.

1.11 EXTRA MATERIALS

A. At project closeout, supply the Owner or owner's representative twelve (12) feet of each type of running trim used on the job for future patching and repair work.

B. If custom knife blades are cut to produce trim, provide them to the Owner or owner's representative.

PART 2 PRODUCTS

2.1 LUMBER

A. Grading and Marking:

1. Lumber shall bear the grade mark, stamp, or other identifying marks indicating grades of material.

2. Such identifying marks on a material shall be in accordance with the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.

3. The inspection agency for lumber shall be approved by the Board of Review, American Lumber Standards Committee, to grade species used.
B. Sizes:
   1. Lumber Size references, unless otherwise specified, are nominal sizes, and actual sizes shall be within manufacturing tolerances allowed by the standard under which product is produced.
   2. Standing and running trim, and rails: Match existing profiles EXACT. Provide custom cut blades/profilers if necessary.

C. Hardwood: MM-L-736, species as specified for each item.

D. Softwood: PS-20 Western Red Cedar or preservative treated softwood listed below.
   1. Use C and Better Clear for painted or opaque finish trim.

E. Preservative treated softwood: Tenon Manufacturing Lifespan Solid Select.
   1. FSC Certified Radiata Pine
   2. Kiln dried, clear grade lumber, no finger joints or knots.
   3. Light Organic Solvent Preservative (LOSP) pressure treated with active ingredients tebuconazole, propiconazole and permethrin to 0.08%m/m total azole average, 0.06%m/m minimum. Treatment in accordance with NZS3640 and AS 1604.1:H3.
   4. Factory primed with two coats alkyd primer applied at 3-4 wet mils with total dry film build of 3-4 mils.
   5. Moisture content 10-15%
   6. Profiles to match existing.

2.2 PLYWOOD

A. Grading and Marking:
   1. Each sheet of plywood shall bear the mark of a recognized association or independent inspection agency that maintains continuing control over the quality of the plywood.
   2. The grading mark shall identify the plywood by species group or identification index, and shall show glue type, grade, and compliance with PS1.

B. Plywood, 1/2 inch and thicker; not less than five ply construction except 1-1/4 inch thick plywood which shall not be less than seven ply.

C. Use Type I, (exterior) Sound Grade veneer for paint finish.

D. Use rotary cut white birch unless specified otherwise.

E. Plywood exposed to weather or in contact with plaster, masonry or concrete, shall be preservative treated in accordance with AWPA Standards.
2.3 MOISTURE CONTROL

A. Exterior treated or untreated finish lumber and trim 4 inches or less in nominal thickness: 15 percent.

B. Moisture content of other materials shall be in accordance with the standards under which the products are produced.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive wood framing for imperfections that could impair performance or appearance of finished product including poor welds and out of square conditions.

B. Correct conditions that could impair performance or appearance of wood framing before proceeding with work in this section.

3.2 INSTALLATION

A. Secure trim with fine finishing nails, screws, or glue as required.

B. Set nails for putty stopping. Use washers under bolt heads where no other bearing plate occurs.

C. Seal cut edges of preservative treated wood materials with a certified acceptable sealer.

D. Plumb and level items unless shown otherwise.

E. Nail finish at each blocking, lookout, or other nailer and intermediate points; toggle or expansion bolt in place where nails are not suitable.

F. Joints shall be close fitted, metered, tongue and grooved, rebated, or lapped to exclude water.
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SECTION 07 46 23 – WOOD SIDING

PART 1 GENERAL

1.1 HISTORIC SIGNIFICANCE

A. The Ball & Socket Manufacturing Buildings are all considered significant historic structures and are listed on the CT Register of Historic Buildings. All work shall conform to National Park Service (NPS) standards and as such must be completed in such a way as to protect existing architectural features from damage and to retain as much historic fabric as possible.

1.2 SECTION INCLUDES

A. New and reclaimed wood siding and wood trim
B. New wood trim and boards
C. New dimension lumber

1.3 RELATED SECTIONS

A. Section 02 41 14.13 – Removal and Salvage of Construction Materials
B. Section 06 20 50 – Exterior Finish Carpentry
C. Section 07 62 00 – Sheet Metal Flashing and Trim
D. Section 07 92 00 – Joint Sealants
E. Section 09 91 13 - Painting

1.4 REFERENCES

A. FSC – Forest Stewardship Council Certification.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.
B. Product Data:
   1. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
C. Verification Samples:
   1. For each profile specified, submit one physical sample, minimum 12 inches long, and clearly labeled and identified on the back surface.
D. Manufacturer's Installation Instructions:
   1. Submit manufacturer’s published installation procedures.

E. Manufacturer's Certificates:
   1. Certify products are suitable for intended use and products meet or exceed specified requirements.

F. Qualifications Data:
   1. Submit installer’s qualifications, including reference projects of similar scope and complexity, with current phone numbers and contact names of Architect and Owner for verification.

1.6 MOCK-UP
   A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
      1. Finish areas as designated by Architect.
      2. Do not proceed with remaining work until workmanship is approved by Architect.
      3. Refinish mock-up area as required to produce acceptable work.

1.7 QUALIFICATIONS
   A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten (10) years documented experience harvesting and milling forest products.
   B. Applicator Qualifications:
      1. Company specializing in performing work of this section with minimum three (3) years documented experience installing specified products.
      2. Designate individual as foreman who shall be on site at all times during installation.
   C. Certified wood operations shall be FSC certified.

1.8 DELIVERY, STORAGE, AND HANDLING
   A. Deliver materials to site in manufacturers unopened original packaging bearing manufacturer’s name, batch number, and product designation. Inspect for damage.
   B. Store materials in unopened containers. Follow manufacturer’s recommendations for storage temperature and conditions.
   C. Handling: Follow manufacturer’s recommendations for handling materials to avoid damage.
1.9 ENVIRONMENTAL REQUIREMENTS
   A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.10 SEQUENCING
   A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
   B. Ensure that other work to be covered or concealed by the work of this section is complete and approved prior to proceeding.
   C. Convene and organize a pre-installation meeting a minimum of two weeks prior to work of this section beginning to confirm schedule, procedures, and approval processes.

1.11 WARRANTY
   A. Submit signed copies of the following warranties against adhesive and cohesive failure of sealant and against infiltration of water and air through sealed joint for period of 3 years from date of completion.
   B. Manufacturer's standard warranty covering sealant materials.
   C. Applicator's standard warranty covering workmanship.

PART 2 PRODUCTS

2.1 SIDING
   A. Salvaged Siding: Properly de-leaded and prepared siding salvaged in Section 02 41 14.13 and pre-primed on all four sides in accordance with Section 09 91 13.
      1. FSC Certified Radiata Pine
      2. Kiln dried, clear grade lumber, no finger joints or knots.
      3. Light Organic Solvent Preservative (LOSP) pressure treated with active ingredients tebuconazole, propiconazole and permethrin to 0.08% m/m total azole average, 0.06% m/m minimum. Treatment in accordance with NZS3640 and AS 1604.1:H3.
      4. Factory primed with two coats alkyd primer applied at 3-4 wet mils with total dry film build of 3-4 mils.
      5. Moisture content 10-15% 
      6. 1/2 inch by 6-inch tapered to match existing profile.
C. Fasteners: Maze CLWCSS8WS or equal 2.5-inch long, 15-degree wire collation, Type 204 stainless steel, Slim-Jim, wood siding ring shank nails. Electro-galvanized fasteners are NOT acceptable.

2.2 ACCESSORIES

A. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

B. Water resistive barrier (WRB): Benjamin Obdyke “Flatwrap HP” or equal commercial grade, tri-laminate WRB with enhanced UV and tear resistance.
   1. Roll width: 5 FT
   2. Roll length: 100 FT
   3. Vapor permeance: 35 perms
   4. UV exposure rating: 180 days
   5. Warranty: 10 year product and 15 year system warranty.

C. Rainscreen: Benjamin Obdyke Slicker Classic or equal vertically channeled, underlayment designed to direct bulk water out of the wall assembly.
   1. Width: 39 inches
   2. Length: 45 feet
   3. Thickness: 0.25 inch
   4. Weight: 7.2 pounds/roll
   5. Compression and thickness: 0.264” at 0 psf, 2.47” at 50 psf, 2.41” at 100 psf, 2.35” at 150 psf.
   6. UV Exposure: 30 days
   7. Warranty: 10 year product and 15 year system warranty.

D. Flashing: Benjamin Obdyke Hydroflash GP or equal self-adhered, drainbale butyl flashing tape.
   1. Installation temperature: 25 d Fahrenheit minimum.
   2. AAMA 711 approved
   3. Self- adhering, self-sealing
   4. Seam tape roll width: 2.5 inch or 4-inch to suit application
5. Flashing roll width: 6-inch or 9-inch (9-inch minimum for sills) to suit application.

6. Warranty: 10 year product and 15 year system warranty

E. Fasteners: Staples and cap fasteners as recommended by WRB manufacturer to achieve 15 year system warranty.

F. Caulks and Sealants: As recommended by WRB manufacturer to achieve 15 year system warranty.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate surfaces are properly prepared and ready to receive work.

B. Verify lead abatement procedures are completed on all salvage material and that salvaged material is dry, repaired, ad in good condition to be re-installed.

C. Verify that all materials to be installed are properly back-primed.

D. Report unsatisfactory conditions in writing to the Architect;

E. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Clean surfaces to remove dirt, dust, oils, wax, paints, and other contamination capable of affecting installation and painting procedures.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 WEATHER RESISTIVE BARRIER INSTALLATION

A. Properly flash all openings and penetrations in accordance with the flashing/WRB manufacturer’s instructions.

B. Install water resistive barrier (WRB) over sheathing as directed by manufacturer to achieve 15 year system warranty. Install system as a primary air-barrier and tape all seams with minimum 2.5-inch wide seam tape.

C. Install rainscreen as directed by manufacturer over completed WRB. Provide insect infiltration deterrent flashing at bottom of wall.

1. Do not stretch rainscreen during installation. Rainscreen shall lay flat with drainage channels properly aligned in the vertical position.

2. Fasten rainscreen to wall with ½ inch staples every 3 square feet.

3. Butt edges of new rolls and new courses. Do not overlap rainscreen material.
3.4 SIDING INSTALLATION

A. Install siding over completed and approved weather resistive barrier.

B. Salvaged siding shall be installed along West Main Street and Willow Street facades first to ensure maximum exposure of historic siding toward public streets. A determination after those sides are completed will be made by the Architect in conjunction with the siding installer as to how to best use and maximize the remaining salvage material.

C. Products shall have all butt and scarf joints caulked with a quality, exterior rated, flexible caulk (Sealant Type 1) prior to paint application. All non-trim/fascia abutments shall be caulked and sealed with the same exterior grade caulk (Sealant Type 1).

D. Seal all end cuts with compatible primer.

E. Joints shall fall over framing lumber and shall be double nailed. Trim boards of 10 inches or greater in width require 3 nails evenly spaced across the face of the board. Do not nail any less than 1/2 inch from any edge and fasten at a minimum of every 24 inches on center.

F. Drive nails perpendicular to the framing lumber and the wood trim product; drive nails flush with the product's surface and without breaking the primer seal. Hand nailing is preferred but use of a nail gun will be accepted so long as the air pressure is adjusted precisely to achieve a flush finish. Nails shall penetrate at least 1-1/2 inches into the structural framing.

G. Pre-drill siding at end joints to prevent splitting.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 07 46 23
SECTION 07 62 00 – SHEET METAL FLASHING & TRIM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. All labor, equipment, and materials to fabricate and install the following.
   1. Edge strip and flashing.
   2. Fascia, trim and edge metal.
   3. Perimeter gutters and vertical rainwater leaders.

1.2 RELATED SECTIONS

A. Section 06 10 00 – Rough Carpentry
B. Section 06 20 50 – Exterior Finish Carpentry
C. Section 07 46 23 – Wood Siding
D. Section 07 92 00 – Joint Sealants

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)
   1. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvannealed) by the Hot-Dip Process.

B. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)
   1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal.

C. Warnock Hersey International, Inc., Middleton, WI (WH)
D. Factory Mutual Research Corporation (FMRC)

E. Underwriters Laboratories (UL)

F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

G. National Roofing Contractors Association (NRCA)

H. American Society of Civil Engineers (ASCE)

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data:
   1. Provide manufacturer's specification data sheets for each product.
   2. Metal material characteristics and installation recommendations.
   3. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.

C. Samples: Submit two (2) samples, illustrating typical metal edge, coping, gutters, fascia extenders for material and finish.

D. Shop Drawings
   1. For manufactured and ANSI/SPRI approved shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
   2. Indicate material profile, jointing pattern, jointing details, fastening methods, flashing, terminations, and installation details.
   3. Indicate type, gauge and finish of metal.

E. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

1.5 QUALITY ASSURANCE

A. Engage an experienced contractor specializing in sheet metal flashing work with a minimum of five (5) years experience.
B. Maintain a full-time supervisor/foreman who is on the job-site at all times during installation. Foreman must have a minimum of five (5) years experience with the installation of similar system to that specified.

C. Source Limitation: Obtain components from a single manufacturer. Secondary products which cannot be supplied by the specified manufacturer shall be approved in writing by the primary manufacturer prior to bidding.

D. Upon request fabricator/installer shall submit work experience and evidence of financial responsibility. The Owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.

B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials which may cause discoloration or staining.

1.7 PROJECT CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for flashings.

1.8 DESIGN AND PERFORMANCE CRITERIA

A. Thermal expansion and contraction:

1. Completed metal edge flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.

1.9 WARRANTIES

A. Owner shall receive one (1) warranty from manufacturer of flashing materials covering all of the following criteria. Multiple warranties are not acceptable.

1. Pre-finished metal material shall require a written twenty (20)-year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D2244 or chalking excess of 8 units per ASTM D659. If either occurs material shall be replaced per warranty, at no cost to the Owner.

2. Warranty shall commence on date of substantial completion or final payment, whichever is agreed by contract.
3. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

PART 2 PRODUCTS

2.1 PRODUCTS, GENERAL

A. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

B. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.

1. Proposals shall be accompanied by a copy of the manufacturer's standard specification section. That specification section shall be signed and sealed by a professional engineer licensed in the state in which the installation is to take place. Substitution requests containing specifications without licensed engineer certification shall be rejected for non-conformance.

2. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.

3. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 MATERIALS

A. General: Product designations for the materials used in this section shall be based on performance characteristics as shown below and shall form the basis of the contract documents.

B. Materials: 22 gauge zinc-coated steel, ASTM A653, coating designation G-90, chemically treated, commercial or lock-forming quality. Minimum gauge of steel shall be in accordance with Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractor's National Association, Inc. recommendations

C. Finishes:

1. Exposed surfaces for coated metal flashing and trim:

   a. Two coat coil applied, baked-on full-strength (70% resin) fluorocarbon coating system (polyvinylidene fluoride, PVF2), applied by manufacturer's approved applicator.
b. Coating system shall provide nominal 1.0 mil dry film thickness, consisting of primer and color coat.

c. Color shall be selected by the Architect. Weathering finish as referred by National Coil Coaters Association (NCCA).

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencil Hardness</td>
<td>ASTM D3363 / NCCA II-2</td>
<td>HB-H</td>
</tr>
<tr>
<td>Bend</td>
<td>ASTM D-4145 / NCCA II-19</td>
<td>O-T</td>
</tr>
<tr>
<td>Cross-Hatch Adhesion</td>
<td>ASTM D3359</td>
<td>no loss of</td>
</tr>
<tr>
<td>adhesion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloss (60° angle)</td>
<td>ASTM D523</td>
<td>25 +/- 5%</td>
</tr>
<tr>
<td>Reverse Impact</td>
<td>ASTM D2794</td>
<td>no cracking or</td>
</tr>
<tr>
<td>loss</td>
<td></td>
<td>loss of adhesion</td>
</tr>
<tr>
<td>Primer Thickness</td>
<td>ASTM D1005</td>
<td>0.2 mils</td>
</tr>
<tr>
<td>Topcoat Thickness</td>
<td>ASTM D1005</td>
<td>0.8 mils</td>
</tr>
<tr>
<td>TOTAL THICKNESS</td>
<td></td>
<td>1.0 mils</td>
</tr>
</tbody>
</table>

2. Exposed and unexposed surfaces for mill finish flashing and trim shall be as shipped from the mill.

3. Exposed and unexposed surfaces for anodized aluminum flashing and trim shall be as shipped from mill.

2.3 RELATED MATERIALS AND ACCESSORIES

A. Metal Primer: Zinc chromate type.

B. Plastic Cement: ASTM D 4586

C. Sealant: Specified in Section 07 92 13 or on drawings.

D. Fasteners:

1. Corrosion resistant screw fastener as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.

2. Fastening shall conform to Factory Mutual requirements or as stated on section details, whichever is more stringent.
PART 3 EXECUTION

3.1 PROTECTION

A. Isolate metal products from dissimilar metals, masonry or concrete with bituminous paint, tape, or slip sheet. Use gasketed fasteners where required to prevent corrosive reactions.

3.2 GENERAL

A. Fastening of metal to walls and wood blocking shall comply with building code standards.

B. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

C. Allow sufficient clearances for expansion and contraction of linear metal components. Secure metal using fasteners as required by the system. Exposed face fastening will be rejected.

3.3 INSPECTION

A. Perform field measurements prior to fabrication.

B. Coordinate work with work of other trades.

C. Verify that substrate is dry, clean and free of foreign matter.

D. Commencement of installation shall be considered acceptance of existing conditions.

3.4 SHOP-FABRICATED SHEET METAL

A. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.

B. Hem exposed edges.

C. Angle bottom edges of exposed vertical surfaces to form drip.

D. Lap corners with adjoining pieces fastened and set in sealant.

E. Form joints for gravel stop fascia system, coping cap with a 3/8" opening between sections. Back the opening with an internal drainage plate formed to the profile of fascia piece.

F. Install sheet metal to comply with referenced ANSI/SPRI, SMACNA and NRCA standards.

3.5 CLEANING

A. Clean installed work in accordance with the manufacturer's instructions.

B. Replace damaged work than cannot be restored by normal cleaning methods.
3.6 CONSTRUCTION WASTE MANAGEMENT

A. Remove and properly dispose of waste products generated. Comply with requirements of authorities having jurisdiction

B. Dispose of all waste in a legal manner.

3.7 FINAL INSPECTION

A. At completion of installation and associated work, meet with Contractor, Architect, installer, installer of associated work, and Owner.

B. Inspect work and flashing of penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.

C. Repair or replace deteriorated or defective work found at time above inspection as required to produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

D. Notify the Architect upon completion of corrections.

E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

END OF SECTION 07 62 00
SECTION 07 84 00 – FIRESTOPPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tested Firestopping Systems:
   1. Firestop devices.
   2. Firestop sealants.
   3. Fire resistive joint fire containment.

1.2 RELATED SECTIONS

A. Section 01 73 29 – Cutting and Patching
B. Section 02 41 14.13 – Removal and Salvage of Construction Materials
C. Division 26 – Electrical

1.3 REFERENCES

A. American National Standards Institute (ANSI):

B. ASTM International (ASTM):


7. ASTM E 2174 - Standard Practice for On-Site Inspection of Installed Fire Stops.


C. FM Global (FM) - FM4991 - Standard for Approval of Firestop Contractors.

D. National Fire Protection Association (NFPA):
   1. NFPA 70 - National Electrical Code.


1.4 DEFINITIONS

A. Firestopping: Material or combination of materials used to retain integrity of fire-rated construction by maintaining an effective barrier against the spread of flame, smoke, and hot gases through penetrations in, or construction joints between, fire rated wall and floor assemblies.

1.5 PERFORMANCE REQUIREMENTS

A. Provide products and systems identical to those tested and listed for classification by at least one the following:
   1. Underwriters Laboratories Inc. (UL), in "Fire Resistance Directory".
   2. Intertek Testing Service (Formerly known as Omega Point Laboratories), in "Directory of Listed Products."
   3. Any other qualified independent testing and inspection agency that conducts periodic follow-up inspections and is acceptable to authorities having jurisdiction.

B. Provide firestop products that are flexible enough to allow for pipe vibration in a through penetration application.

C. Provide firestop sealants and sprays for construction joint applications that are flexible enough to satisfy the movement criteria per the test standards ASTM E 1399, ASTM E 1966.
or ANSI/UL 2079.

D. Provide products with flame spread index of less than 25 and smoke developed index of less than 450, when tested in accordance with ASTM E 84.

E. Provide products that meet the intent of the L rating classification for the movement of smoke per ANSI/UL 1479 for through penetrations and ANSI/UL 2079 for construction joints.

F. Provide products that bear classification marking of qualified independent testing agency.

G. Where firestop systems not listed by any listing agency are required due to project conditions, submit an engineering judgment derived from similar qualified tested system designs or other tests for review and approval prior to installation. Engineering judgment documents must follow requirements set forth by the International Firestop Council.

H. Use only products specifically listed for use in listed systems.

I. Provide products that are compatible with each other, with the substrates forming openings, and with the items, if any, penetrating the firestopping, under the conditions represented by this project, based on testing and field performance demonstrated by manufacturer.

J. Firestopping materials must meet and be acceptable for use by all building codes and NFPA codes cited in this section.

1.6 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Shop Drawings: For each firestopping system, provide the following:

1. Listing agency's detailed drawing showing opening, penetrating item(s), and firestopping materials, identified with listing agency's name and number or designation and fire rating achieved.

2. For proposed systems that do not conform strictly to the listing, submit listing agency's drawing marked to show modifications and approved by firestop system manufacturer.

C. Product Certificates: Submit certificates of conformance signed by firestop system manufacturer certifying that materials furnished comply with requirements.

D. Product Data: Furnish manufacturer's product data sheets on each material to be used in firestop systems. Information on manufacturer's product data sheet should include:

1. Product characteristics including compliance with appropriate ASTM/UL/ANSI test standards.

2. Storage and handling requirements and recommendations.

3. Material safety data sheets (MSDS)

E. Installation Instruction: Furnish manufacturer's installation instructions.
1.7 QUALITY ASSURANCE

A. General: All through-penetration firestop systems shall be installed with approved methods using materials that have been tested and classified to produce an approved assembly.

B. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years experience.

C. Installation Responsibility: Installation of through-penetration firestop systems and fire-resistant joint systems shall be made by a sole source firestop specialty contractor.

D. Installer Qualifications: Firm must be qualified by having experience, staff, and be properly trained to install the specified products, and meets the following criteria:

1. Firm shall have not less than 3 years experience with fire stop installation.

2. Contractor is acceptable to manufacturer.

3. Contractor is acceptable to authority having jurisdiction.

4. Contractor has completed the manufacturer's certified product installation training.

5. Contractor must provide a list of completed projects as evidence of experience; include project name and address, owner's name and address, and architect's name and phone number.

6. Contractor shall have at least of the following qualifications and shall provide certificate of qualification:

   a. FM 4991 Approved Contractor

   b. UL Approved Contractor

   c. Hilti Accredited Fire Stop Specialty Contractor

E. Codes: Where manufacturer's application procedures are in conflict with those of the code authority having jurisdiction, the more strict guidelines will prevail.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products until ready for installation in manufacturer's original unopened packaging, legibly marked with manufacturer's name and product identification, date of manufacture, lot number, shelf life, listing agency's classification marking, curing time, and mixing instructions if applicable.

B. Store and handle in such a manner as to prevent deterioration or damage due to moisture, temperature changes, contaminants, and other causes; follow manufacturer's instructions. Coordinate delivery of materials with scheduled installation date to allow minimum storage time at job-site.

C. Store and dispose of hazardous materials, and materials contaminated by hazardous materials,
in accordance with requirements of local authorities having jurisdiction.

1.9 PROJECT CONDITIONS

A. Coordinate construction and cutting of openings so that each particular firestop system may be installed in accordance with its listing, including sizing, sleeves, and penetrating items.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install firestopping under environmental conditions outside manufacturer's absolute limits.

C. Provide ventilation as required by firestopping manufacturer, including mechanical ventilation if required.

D. During installation, provide masking and drop cloths to prevent firestopping materials from contaminating any adjacent surfaces.

1.10 WARRANTY

A. At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Hilti

B. 3M Fire Protection Products

C. Tremco

D. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

E. Single Source: To maintain control and integrity of the firestop applications a single manufacturer should be used. Specific UL or approved listing agencies systems applicable to each type of firestop condition should be supplied by one manufacturer.

2.2 SCOPE/APPLICATION

A. Provide installed firestop protects that limit the spread of fire, heat, smoke, and gasses through otherwise unprotected openings in rated assemblies, including walls, partitions, floors, roof/ceilings, and similar locations restoring the integrity of the fire rated construction to its original fire rating.

B. Provide firestop systems listed for the specific combination of fire rated construction, type of penetrating item, annular space requirements, and fire rating, and the following criteria:

1. F-Rating: Equal to or greater than the fire-resistance rating of the assembly in which the
firestopping will be installed.

2. T-Rating: In habitable areas where penetrating items are exposed to potential contact with materials on fire side(s) of rated assembly, T-rating must equal its F-rating.

3. L-Rating: L-rating of 1 cfm per linear foot (5.5 cu m/h/m) maximum at ambient temperatures.

4. Wall Penetrations: Systems must be symmetrical, with the same rating from both sides of the wall.

5. Testing: Determine ratings in accordance with ASTM E 814 or UL 1479.

C. Provide firestopping systems listed for construction gaps per the specific combination of fire-rated construction type, configuration, gap dimensions, and fire rating, and the following criteria:

1. Fire resistance rating must be equal to or greater than that of the assembly in which it is to be installed.

2. Movement capability must be appropriate to the potential movement of the gap, demonstrated by testing in accordance with ASTM E 1399 for minimum of 500 cycles at 10 cycles per minute.

3. L-Rating: L-rating of 1 cfm per linear foot (5.5 cu m/h/m) maximum.

4. Determine ratings in accordance with UL 2079.

2.3 MATERIALS

A. Use only firestop products that have been UL 1479, ASTM E 814 or UL 2079 tested for specific fire-rated construction conditions conforming to construction assembly type, penetrating item type, annular space requirements, and fire-rating involved for each separate instance.

B. Firestop Joint Spray: Hilti CFS-SP WB or approved equal sprayable fire-rated mastic for construction joints with the following characteristics:

1. Composition: Water-based, non-solvent; contains no halogens or asbestos.

2. Application: By spray or brush.


4. Flexibility: 500 cycles in accordance with ASTM E 1966 and UL 2079 (Class II and Class III approval).

5. Density: 10.8 lb/gal

6. Average Volume Shrinkage: 51.1% in accordance with ASTM C 1241.
7. Flame Spread/Smoke Development: 15/10

8. Color: Red (Paintable)

C. Flexible Firestop Sealant: Hilti CP 606 or approved equal acrylic based firestop sealant with the following characteristics:

1. Composition: Acrylic-based; contains no silicone, halogens or asbestos.
3. Chemical basis: Acrylic based.
4. Flexibility: 33% movement with 500 cycles in accordance with ASTM E 1966 and UL 2079.
5. Average Volume Shrinkage: 22.2% in accordance with ASTM C 1241.
6. Flame Spread/Smoke Development: 10/0
7. Color: Red (Paintable)

D. Firestop Putty: Hilti CP 618 or approved equal intumescent, non-hardening firestop putty for cable and pipe penetrations with the following characteristics:

1. Composition: Moldable putty; contains no volatile solvents or asbestos. Non-curing.
2. Application: Reusable, able to re-penetrate.
3. Density: 1.48g/cm³.
4. Average Volume Shrinkage: 22.2% in accordance with ASTM C 1241.
5. Flame Spread/Smoke Development: 15/10
6. Color: Red

E. Sprayable Fire-rated Mastic: Hilti CP 672 Speed Spray or equal sprayable fire-rated mastic for construction joints with the following characteristics:

1. Composition: Water-based, non-solvent; contains no halogens or asbestos.
2. Application: By spray or brush.
4. Flexibility: 500 cycles in accordance with ASTM E 1966 and UL 2079 (Class II and Class III approval).
5. Density: 1.25g/cm³
6. Movement Capability: up to 50%.

7. Flame Spread/Smoke Development: 10/10

8. Color: Red (Paintable)

F. Firestop Sealant: Hilti FS-ONE or equal high performance intumescent firestop sealant with the following characteristics:

1. Composition: Water-based, non-solvent; contains no halogens or asbestos.


4. Flexibility: 500 cycles in accordance with ASTM E 1966 and UL 2079 (Class II and Class III approval).

5. Average Volume Shrinkage: 24.1% in accordance with ASTM C 1241.

6. Movement Capability: 5%.

7. Unrestricted expansion rate: 3-5 times original volume

8. Flame Spread/Smoke Development: 0/5

9. Color: Red (Paintable)

G. Mineral Wool: Thermafiber SAFB or equal synthetic vitreous fiber fire safing with the following characteristics:


2. Density: 4 lb/ft³.

3. Facing: None (unfaced)

4. Thickness: as required to suit assembly

5. Flame Spread/Smoke Development: 0/0

6. Combustibility: non-combustible in accordance with ASTM E 136

7. Regulatory approval: ASTM E 814, UL 1479 safing insulation for through penetration systems; UL 2079 safing insulation for construction joint systems.
PART 3  EXECUTION

3.1  EXAMINATION

A.  Do not begin installation until substrates have been properly prepared.

B.  Conduct tests according to manufacturer's written recommendations to verify that substrates are free of oil, grease, rolling compounds, incompatible primers, loose mill scale, dirt and other foreign substances capable of impairing bond of firestopping.

C.  Verify that items penetrating fire rated assemblies are securely attached, including sleeves, supports, hangers, and clips.

D.  Verify that openings and adjacent areas are not obstructed by construction that would interfere with installation of firestopping, including ducts, piping, equipment, and other suspended construction.

E.  Verify penetrations are properly sized and in suitable condition for application of materials.

F.  Comply with manufacturer's recommendations for temperature and humidity conditions before, during and after installation of firestopping.

G.  If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2  PREPARATION

A.  Prepare substrates and penetrations in accordance with manufacturer’s instructions and recommendations.

B.  Install masking and temporary coverings as required to prevent contamination or defacement of adjacent surfaces due to firestopping installation.

3.3  INSTALLATION

A.  Install firestop materials in accordance with UL Fire Resistance Directory.

B.  Comply with manufacturer's instructions for installation of through-penetration and construction joint materials.

C.  Seal all holes or voids made by penetrations to ensure an air and water resistant seal. Install so that openings are completely filled and material is securely adhered.

D.  Where firestopping surface will be exposed to view, or where directed by Architect, finish to a smooth, uniform surface flush with adjacent surfaces.

E.  After installation is complete, remove combustible forming materials and accessories that are not part of the listed system.

F.  Repair or replace defective installations to comply with requirements.
G. At each through penetration, attach identification labels on both sides in location where label will be visible to anyone seeking to remove penetrating items or firestopping. (See Section 3.4 below.)

H. Clean firestop materials off surfaces adjacent to openings as work progresses, using methods and cleaning materials approved in writing by firestop system manufacturer and which will not damage the surfaces being cleaned.

I. Notify authority having jurisdiction when firestopping installation is ready for inspection; obtain advance approval of anticipated inspection dates and phasing, if any, required to allow subsequent construction to proceed.

J. Do not cover firestopping with other construction until approval of authority having jurisdiction has been received.

3.4 IDENTIFICATION & DOCUMENTATION

A. Identify through-penetration firestop systems with pressure-sensitive, self-adhesive, preprinted vinyl labels. Attach labels permanently to surfaces of penetrated construction on both sides of each firestop system installation where labels will be visible to anyone seeking to remove penetrating items or firestop systems. Include the following information on labels:


2. Through-Penetration firestop system designation of applicable testing and inspecting agency.

3. Listing agency's system number or designation.

4. System manufacturer's name, address, and phone number.

5. Installer's name, address, and phone number.

6. General contractor's name, address, and phone number (if applicable).

7. Date of installation.

3.5 CLEANING AND PROTECTION

A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation.

B. Touch-up, repair or replace damaged products before Substantial Completion.
PART 4  SCHEDULE

4.1 Provide the following firestop systems at the designated barrier construction types. Refer to the Contract Documents for further detail and information. Submit alternate systems for conditions not described herein for approval.

<table>
<thead>
<tr>
<th>UL System No.</th>
<th>Barrier Construction</th>
<th>Description</th>
<th>Rating</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW-D-0042</td>
<td>Gypsum wall to concrete metal deck (perpendicular)</td>
<td>Gypsum wall to concrete over fluted metal deck with optional use of spray-on fireproofing (top-of-wall)</td>
<td>1 or 2HR</td>
<td>Firestop Joint Spray</td>
</tr>
<tr>
<td>HW-D-0049</td>
<td>Gypsum wall to concrete metal deck (parallel)</td>
<td>Gypsum wall to concrete over metal deck with optional use of spray-on fireproofing (top-of-wall)</td>
<td>1 or 2HR</td>
<td>Firestop Joint Spray</td>
</tr>
<tr>
<td>HW-D-0258</td>
<td>Concrete / block wall to concrete metal deck (parallel)</td>
<td>Concrete or block wall to concrete over fluted metal deck with structural steel beams or bar joists penetrating wall (top-of-wall) (Max JW=1&quot;)</td>
<td>2 hour</td>
<td>Sprayable Fire-rated Mastic, Firestop Joint Spray</td>
</tr>
<tr>
<td>W-L-1054</td>
<td>Gypsum Board Wall</td>
<td>Max. 30&quot; steel, cast iron, max. 6&quot; copper, conduit or max. 4&quot; EMT pipe (AS = 0&quot; to 2-1/4&quot;)</td>
<td>1 or 2HR</td>
<td>Intumescent Firestop Sealant</td>
</tr>
<tr>
<td>W-L-8065</td>
<td>Gypsum Board Wall</td>
<td>Insulated or non-insulated steel or copper, nonmetallic pipes, and cables (AS varies)</td>
<td>1 or 2HR</td>
<td>Intumescent Firestop Sealant, Mineral Wool</td>
</tr>
<tr>
<td>W-L-3065</td>
<td>Gypsum Board Wall</td>
<td>Cable bundle (various cables) (Steel sleeve optional) (AS=0&quot; to 1&quot;)</td>
<td>1 or 2HR</td>
<td>Elastomeric Firestop Sealant, Flexible Firestop Sealant, Firestop Putty Stick, Intumescent Firestop Sealant</td>
</tr>
</tbody>
</table>
| Code    | Type                        | Description                                                                 | Rating | Seal
|---------|-----------------------------|-----------------------------------------------------------------------------|--------|------
| C-AJ-3095 | Concrete Floor              | Cable bundle (various cables) (Steel sleeve optional) (2-1/2"Concrete)      | 3 hour | Intumescent Firestop Sealant
|         | Concrete/Masonry Wall       |                                                                             |        |      
| C-AJ-1226 | Concrete Floor              | Max. 30" steel, cast iron, max. 6" copper, conduit or max. 4" EMT pipe (Sleeve Optional) (AS=0" to 1-7/8") | 3 hour | Intumescent Firestop Sealant
|         | Concrete/Masonry Wall       |                                                                             |        |      |

END OF SECTION 07 84 00
SECTION 07 92 00 – JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Exterior sealants.

1.2 RELATED SECTIONS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
B. Section 06 20 50 – Exterior Finish Carpentry
C. Section 07 46 23 – Wood Siding
D. Section 07 62 00 – Sheet Metal Flashing and Trim
E. Section 09 91 13 - Painting

1.3 REFERENCES
K. 2014 UL Fire Resistance Directory
1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data:
   1. Materials list of items proposed to be provided under this Section;
   2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;

C. Samples:
   1. Submit color charts for each sealant type for initial selection.
   2. Submit standard cured color samples for each sealant type illustrating selected colors.

D. Manufacturer's Installation Instructions:
   1. Submit manufacturer's published installation procedures.
   2. Include instructions for completing sealant intersections when different materials are joined.

E. Manufacturer's Certificates:
   1. Certify products are suitable for intended use and products meet or exceed specified requirements.
   2. Certify applicator is approved by manufacturer.

F. Qualifications Data:
   1. Submit applicator's qualifications, including reference projects of similar scope and complexity, with current phone numbers and contact names of architects and owners for verification.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:
   1. Submit recommended inspection intervals.
   2. Submit instructions for repairing and replacing failed sealant joints.

B. Certificate: Upon completion of work, furnish written statement signed by the Contractor, applicator, and manufacturer stating sealant application complies with drawings, specifications, and manufacturer’s recommendations and was proper and adequate for conditions requiring sealant.
1.6 QUALITY ASSURANCE
   A. Perform work in accordance with ASTM C 1193.

1.7 QUALIFICATIONS
   A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten (10) years documented experience.

   B. Applicator Qualifications:
      1. Company specializing in performing work of this section with minimum three (3) years documented experience, minimum three successfully completed projects of similar scope and complexity, and approved by manufacturer.
      2. Designate individual as foreman who shall be on site at all times during installation.

1.8 DELIVERY, STORAGE, AND HANDLING
   A. Accept materials on site in manufacturers unopened original packaging bearing manufacturer’s name, batch number, and product designation. Inspect for damage.

   B. Store materials in unopened containers. Follow manufacturer’s recommendations for storage temperature and shelf life.

   C. Handling: Follow manufacturer’s recommendations for handling product containing toxic materials. Keep flammable materials away from heat, sparks, and open flame. Use recommended solvents and cleaning agents for cleaning tools, equipment, and skin.

1.9 ENVIRONMENTAL REQUIREMENTS
   A. Maintain temperature and humidity recommended by the manufacturer for 24 hours before, during and after installation until sealants are properly cured.

   B. Do not install primers or sealants when atmospheric temperatures or joint surface temperatures are less than 40 degrees F.

1.10 SCHEDULING
   A. Schedule work so waterproofing, water repellents and preservative finishes are installed after sealants, unless sealant manufacturer approves otherwise in writing.

   B. Ensure sealants are cured before covering with other materials.

1.11 WARRANTY
   A. Submit copies of the following warranties against adhesive and cohesive sealant failure and against water and air infiltration through joints for period of 3 years from date of completion:
      1. Manufacturer's standard warranty covering sealant materials.
      2. Applicator's standard warranty covering workmanship.
PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Hilti.

B. Pecora Corporation.

C. Schnee-Morehead.

D. Sherwin Williams.

E. Requests for substitutions will be considered in accordance with Section 01 60 00.

2.2 SEALANTS

A. Type 1 – Non-Sag Acrylic Latex Caulking Compound: ASTM C 834 Type OP, paintable, siliconized interior and exterior acrylic latex sealant; single component, solvent curing, non-staining, non-bleeding, non-sagging; color as selected. Pecora AC-20 + Silicone.

B. Type 2 – Construction Tripolymer Sealant: single component, high performance elastomeric sealant. Sherwin Williams Geocel 2300 or approved equal.

C. Type 3 – Butyl Sealant: AAMA 809.2, Federal Specification TT-C-1796A, Type 1, Class A, single component, non-drying, non-skinning, non-curing, flexible sealant. Schnee-Morehead Acryl-R SM5430 or approved equal.

2.3 ACCESSORIES

A. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

B. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

C. Joint Backing: Round foam rod compatible with sealant; oversized 25 to 50 percent larger than joint width; recommended by sealant manufacturer to suit application. Incompressible materials or materials containing acrylic, asphalt, oil or solvents shall not be permitted.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

E. Masking tape: Non-staining, non-absorbent tape product compatible with joint sealants and adjacent joint surfaces.
PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate surfaces and joint openings are ready to receive work.
   1. Verify joint surfaces are clean and dry.
   2. Ensure concrete surfaces are fully cured.

B. Report unsatisfactory conditions in writing to the Architect;
C. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Prepare joints in accordance with ASTM C 1193 and manufacturer's instructions.

B. Clean joint surfaces to remove dirt, dust, oils, wax, paints, and other contamination capable of affecting primer and sealant bond.

C. Protect elements surrounding the Work of this section from damage or disfiguration. Apply masking tape to adjacent surfaces when required to prevent damage to finishes from sealant installation.

3.3 SEALANT INSTALLATION

A. Install primer and sealants in accordance with ASTM C 1193 and manufacturer's instructions. Make preliminary test to insure primers and sealants will not stain exposed work or deteriorate back-up materials.

B. Install joint backing to maintain the following joint ratios:
   1. Joints up to 1/2 inch wide: 1:1 width to depth ratio.
   2. Joints greater than 1/2 inch wide: 2:1 width to depth ratio; maximum 1/2 inch joint depth.

C. Install bond breaker where joint backing is not used.

D. Apply primer where required for sealant adhesion.

E. Install sealants immediately after joint preparation.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

G. Tool exposed joint surface concave.

3.4 INSTALLATION, PENETRATION SEAL

A. Comply with the manufacturer’s written instructions to properly form and dam penetration openings to produce a tight foamed in place penetration seal. After curing inspect for
tightness of seal. Make necessary repairs.

B. Provide penetration seals at mechanical and electrical duct, pipe and conduit penetrations through finish surfaces.

C. Penetration seals include fire-stopping and draft stopping at existing smoke barriers.

3.5 MANUFACTURER'S FIELD SERVICES

A. Require sealant manufacturer to be present at project site to:

1. Observe sealant mockup installation and to issue reports of observations.

2. Conduct field pre-construction testing.

3.6 PATCHING

A. Patch or repair defective or damaged sealant installations as directed by the Architect or Owner’s Representative.

3.7 CLEANING

A. Remove masking tape.

B. Clean adjacent surfaces soiled by sealant installation in accordance with manufacturer’s recommendations.

C. Remove wet materials from adjacent surfaces before it has set.

D. Do not use cleaning agents.
PART 4    SCHEDULE

4.1    SEALANT JOINTS

A. Application: Exterior sealant joints between different materials; perimeter joints between exterior materials and frames of doors, windows, louvers and similar openings; control and expansion joints in soffits and overhead surfaces; other exterior joints in vertical surfaces and non-traffic horizontal surfaces for which no other sealant is specified.

1. Sealant Type 1.

B. Application: Non-traffic bearing joints where structural movement or stress is expected; trim sealant for metal components.

1. Sealant Type 2.

C. Application: Concealed bedding sealant bedding joints under metal thresholds and saddles; bedding joints between sheet metal flashing and other materials.

1. Sealant Type 3

D. Application: Gutters, downspouts and other metal to metal or metal to plastic joints which are prone to ponding water.

1. Sealant Type 3

END OF SECTION 07 92 00
SECTION 09 91 13 - PAINTING

PART 1  GENERAL

1.1  SECTION INCLUDES

A. Exterior, paint and coatings systems including surface preparation.

1.2  RELATED SECTIONS

A. Section 02 41 14.13 – Removal and Salvage of Construction Materials.
B. Section 06 20 50 – Exterior Finish Carpentry
C. Section 07 46 23 – Wood Siding
D. Section 07 92 00 – Joint Sealants.

1.3  REFERENCES

A. MPI (APL) – Master Painters Institute.
B. SCAQMD 1168 – South Coast Air Quality Management District Rule #1168; October 3, 2003.

1.4  DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523, a matte flat finish.
B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523, a high-side sheen flat, velvet-like finish.
C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523, an eggshell finish.
D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523, a satin-like finish.
E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523, a semi-gloss finish.
F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523, a gloss finish.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Provide a complete list of all products to be used, with the following information for each:

1. Manufacturer's name, product name, catalog number, and general product category.

2. Cross-reference to specified paint system(s) that the product is to be used in; include description of each system.

3. Indicate VOC content.

C. Samples: Submit three paper samples, 8 inches by 8 inches in size, illustrating selected colors for each color and system selected with specified coats cascaded.

D. Manufacturer's Instructions: Indicate special surface preparation procedures.

E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: a single manufacturer with a minimum of ten (10) years experience will supply all primary products specified in this section.

B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of five (5) years demonstrated experience in installing products of the same type and scope as specified.

C. Paint all exposed surfaces. If a color of finish, or if a surface is not specifically mentioned, Architect will select from standard colors and finishes available.

D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. Finish areas designated by Architect.

2. Do not proceed with remaining work until Architect approves workmanship, color, and sheen.

3. Refinish mock-up area as required to produce acceptable work.
1.8 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:

1. Product name and type (description).
2. Application and use instructions.
4. VOC content.
5. Environmental issues.
6. Batch date.
7. Color number.

B. Storage: Store products in manufacturer's unopened packaging until ready for installation. Store solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

D. Disposal:

1. Dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
2. Never pour leftover coating down any sink or drain. Use up material on the job or seal can and store safely for future use.
3. Do not incinerate closed containers.
4. For specific disposal or recycle guidelines, contact the local waste management agency or district. Recycle whenever possible.

1.9 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

C. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
1.10 WARRANTY

A. At project closeout, provide to the Owner or owner's representative an executed copy of the Manufacturer's standard form outlining the terms and conditions of and any exclusions to their Limited Warranty against Manufacturing Defect.

B. Minimum warranty period shall be one year from substantial completion including labor and materials.

1.11 EXTRA MATERIALS

A. At project closeout, supply the Owner with a minimum of one gallon of each product for touch-up purposes.
   1. Furnish extra paint materials from the same production run as the materials applied.
   2. Package with protective covering for storage and identify with labels describing contents.

B. At project closeout, provide the color mixture name and code to the Owner for accurate future color matching.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Sherwin-Williams (basis of design)

B. Benjamin Moore

C. PPG/Pittsburgh

D. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

2.2 SOURCE LIMITATIONS

A. Obtain paint materials from single source from single listed manufacturer.

2.3 MATERIALS - GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

B. Material Compatibility:
   1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
C. Paints and Coatings:

1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

D. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

E. Volatile Organic Compound (VOC) Content:

1. Provide coatings that comply with the most stringent requirements specified in the following:


   b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site.

F. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small Scale Environmental Chambers."

G. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

H. Compatibility: Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

I. Color: Refer to Finish Schedule or Drawings for paint colors.

2.4 MIXING AND TINTING

A. Except where specifically noted in this section, all paint shall be ready-mixed and pre-tinted.

B. Agitate all paint prior to and during application to ensure uniform color, gloss, and consistency.

C. Thinner addition shall not exceed manufacturer's printed recommendations. Do not use kerosene or other organic solvents to thin water-based paints.

D. Where paint is to be sprayed, thin according to manufacturer's current guidelines.
PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Ensure that surfaces to receive paint are dry immediately prior to application.

C. Ensure that moisture-retaining substrates to receive paint have moisture content within tolerances allowed by coating manufacturer. Where exceeding the following values, promptly notify Architect and obtain direction before beginning work.

1. Concrete and Masonry: 12 percent. Allow new concrete to cure a minimum of 28 days.

2. Plaster and Gypsum: 12 percent.

3. Wood: 15 percent.

4. Concrete Slab-On-Grade: Perform calcium chloride test over 24 hour period or other acceptable test to manufacturer. Verify acceptable moisture transmission and pH levels.

D. Examine surfaces to receive coatings for surface imperfections and contaminants that could impair performance or appearance of coatings, including but not limited to, loose primer, rust, scale, oil, grease, mildew, algae, or fungus, stains or marks, cracks, indentations, or abrasions.

E. The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the MPI Maintenance Repainting Manual. In general, the MPI DSD ratings and descriptions are as follows:

1. DSD-0: Sound Surface (may include visual (aesthetic) defects that do not affect film’s protective properties).

2. DSD-1: Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).

3. DSD-2: Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).

4. DSD-3: Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).

5. DSD-4: Substrate Damage (repair or replacement of surface required by others).

F. No repainting work shall commence until all adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Painting Subcontractor. Application of coatings will be considered as an acceptance of surface conditions.
3.3 PREPARATION - GENERAL

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Clean surfaces thoroughly prior to coating application.

C. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.

D. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.

E. Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturer.

F. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.

G. Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items not indicated to receive coatings.

H. Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.

I. Protect adjacent surfaces not indicated to receive coatings.

J. Prepare all surfaces in accordance with MPI and paint manufacturer's instructions for specified coatings and indicated materials, using recommended methods and materials.

3.4 SURFACE PREPARATION

A. All surfaces: Clean surfaces free of loose particles, sand, efflorescence, laitance, form oil, curing compounds, and other substances which could impair coating performance or appearance.

B. Metals - Aluminum, Mill-Finish: Clean and etch surfaces with a phosphoric acid-water solution or water based industrial cleaner. Flush with clean water and allow to dry, before applying primer coat.

C. Metals - Ferrous, Unprimed: Remove rust or scale, grease, oil, and other contaminants which could impair coating performance or appearance. Clean using methods recommended in writing for specific conditions by the paint manufacturer but not less than the following:
   1. SSPC-SP 2 – Hand Tool Cleaning.

D. Metals - Ferrous, Shop-Primed: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
E. Metals - Galvanized Steel: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

F. Wood:
   1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
   2. Sand surfaces that will be exposed to view, and dust off.
   3. Prime edges, ends, faces, undersides, and backsides of wood.
   4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
   5. Apply primer coat to back of wood trim and paneling PRIOR to installation of materials.

3.5 APPLICATION - GENERAL

A. Apply each coat to uniform thickness in accordance with manufacturer's instructions and to recommendations in "MPI Manual." Do not exceed manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other imperfections are not permitted.

B. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat.

C. Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet.

D. Remove dust and other foreign materials from substrate immediately prior to applying each coat.

E. Where paint application abuts other materials or other coating color, terminate coating with a clean sharp termination line without coating overlap.

F. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside stop corner nearest to face of closed door.

G. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

H. Paint all exposed surfaces. If a color, finish, or surface is not specifically mentioned, the Architect will select from standard colors and finishes available.

I. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.
3.7  PAINTING FIRE SUPPRESSION, PLUMBING, HVAC, ELECTRICAL, COMMUNICATION, AND ELECTRONIC SAFETY AND SECURITY WORK

A. Paint the following work where exposed in equipment rooms:
   1. Equipment, including panelboards and switch gear.
   2. Uninsulated metal piping.
   3. Uninsulated plastic piping.
   4. Pipe hangers and supports.
   5. Metal conduit.
   7. Tanks that do not have factory-applied final finishes.
   8. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
   9. Other mechanical items to be painted.

B. Paint the following work where exposed in occupied spaces:
   1. Equipment, including panelboards and switch gear.
   2. Uninsulated metal piping.
   3. Uninsulated plastic piping.
   4. Pipe hangers and supports.
   5. Metal conduit.
   7. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
   8. Other items as directed by Architect.

3.8  CLEANING

A. Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow to dry.

B. Re-install hardware, electrical equipment plates, grilles and louveres, lighting fixture trim, and other items that have been removed to protect from contact with coatings.
C. Reconnect equipment adjacent to surfaces indicated to receive coatings.

D. Relocate to original position equipment and fixtures that have been moved to allow application of coatings.

E. Remove protective materials.

3.9 PROTECTION

A. Protect completed coating applications from damage by subsequent construction.

B. Repair to Architect's acceptance coatings damaged by subsequent construction activities. Where repairs cannot be made to Architect's acceptance, re-apply finish coating to nearest adjacent change of surface plane, in both horizontal and vertical directions.
PART 4 SCHEDULE

4.1 COLORS AND LOCATIONS

A. Siding and primary surfaces: Flat red to match existing. Final color to be selected by Architect.

B. Trim: Satin red to complement existing. Final color to be selected by Architect.

C. Doors and window sashes: Satin. Final color to be selected by Architect.

4.2 EXTERIOR SURFACES

A. Exterior Wood Trim – Exposed dressed lumber not scheduled to receive shop-applied finish: Satin Finish.
   1. Primer: Penetrating oil-based wood primer. Sherwin Williams Exterior Oil-Based Wood Primer, Y24W8020, at 4.0 mils wet, 2.3 mils dry.
   2. 1st Coat: MPI exterior satin acrylic latex. Sherwin Williams Emerald Exterior Acrylic Satin, K48 Series, at 5.3-6.4 mils wet, 2.1-2.6 mils dry, per coat.
   3. 2nd Coat: MPI exterior satin acrylic latex. Sherwin Williams Emerald Exterior Acrylic Satin, K48 Series, at 5.3-6.4 mils wet, 2.1-2.6 mils dry, per coat.

B. Exterior Wood Siding, SALVAGE MATERIAL – De-leaded, field primed historic siding: Flat Finish.
   1. Primer: Penetrating oil-based wood primer. Sherwin Williams Exterior Oil-Based Wood Primer, Y24W8020, at 4.0 mils wet, 2.3 mils dry.
   2. 1st Coat: MPI exterior flat acrylic latex. Sherwin Williams Emerald Exterior Acrylic Flat, K47 Series, at 5.3-6.4 mils wet, 2.2-2.7 mils dry, per coat.
   3. 2nd Coat: MPI exterior flat acrylic latex. Sherwin Williams Emerald Exterior Acrylic Flat, K47 Series, at 5.3-6.4 mils wet, 2.2-2.7 mils dry, per coat.

C. Exterior Wood Siding, NEW MATERIAL – Factory primed bevel siding: Flat Finish.
   1. Primer: Penetrating oil-based wood primer. Sherwin Williams Exterior Oil-Based Wood Primer: ONLY FOR TOUCHING UP FIELD CUTS AND HOLES.
   2. 1st Coat: MPI exterior flat acrylic latex. Sherwin Williams Emerald Exterior Acrylic Flat, K47 Series, at 5.3-6.4 mils wet, 2.2-2.7 mils dry, per coat.
   3. 2nd Coat: MPI exterior flat acrylic latex. Sherwin Williams Emerald Exterior Acrylic Flat, K47 Series, at 5.3-6.4 mils wet, 2.2-2.7 mils dry, per coat.

END OF SECTION 09 91 13
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