



PRINCIPALS

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ADDENDUM # 2

DATE: September 19, 2014
TO: All Bidders and Plan Holders
FROM: Wayne R. Lawson, P.E.
PROJECT: Adams Barn Renovations, Tyngsborough, MA
CBI JOB NO.: 14059

Bidders are hereby informed that Plans and Specifications for the above-referenced project are modified, corrected and/or supplemented by this Addendum, which shall become a part of the Contract Documents prepared by CBI Consulting Inc. (CBI) dated August 21, 2014. All General Bidders are required to acknowledge all the Addenda issued in paragraph A on the Form for General Bid. Failure to do so shall result in the rejection of your bid. Portions of the Bidding and Contract Documents not altered by this addendum remain in full effect.

SPECIFICATIONS

1. **INSERT** the attached Specification Section: Section 02 62 00 – BIRD GUANO REMEDIATION. Bird Guano is present throughout the building.

END OF ADDENDUM #2

WRL/jds
14059 ADD002 09-19-14

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DIVISION 02

EXISTING CONDITIONS

SECTION 026200

BIRD GUANO REMEDIATION

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of Article III, Paragraph 1 of the CONTRACT AND GENERAL CONDITIONS.

1.02 DESCRIPTION OF WORK

- A. The CONTRACTOR shall provide all labor and equipment to complete the work specified in this Section including, but not limited to, the following:
 - 1. File all necessary notices, obtain all permits and licenses, and pay all governmental taxes, fees, and other costs in connection with the work. Obtain all necessary approvals of all governmental departments having jurisdiction.
 - 2. The removal, cleaning, packaging and disposal of all bird guano, feathers, body parts and animal carcasses throughout the Barn including those on walls, floors, stairs, doors, beams, support beams, cross members, columns, horizontal and vertical surfaces, sill areas around windows, in the ceilings, etc.
 - 3. Perform all sampling and testing required to properly profile the material for waste disposal. This shall also include all testing required by the disposal or recycling facility.
 - 4. The CONTRACTOR shall take appropriate health and safety precautions to protect workers from potential exposure to microbial contamination.
 - 5. Disinfect all interior barn surfaces including, but not necessarily limited to, walls, floors, stairs, doors and in the ceilings.

1.03 SCHEDULING AND SEQUENCING

- A. The CONTRACTOR and the ARCHITECT shall develop a bird guano, feathers, body parts and carcasses removal schedule. The ARCHITECT may choose to alter the work sequence as they see fit.
- B. The CONTRACTOR shall update the schedule and submit any schedule changes for review by the ARCHITECT at the weekly construction meetings.
- C. Disinfection of surfaces will be done after the bulk removal of bird guano, feathers, body

parts and carcasses has been completed. After the bulk removal, the ARCHITECT shall approve the work area before disinfection procedures begin.

1.04 LOCATION OF WORK

- A. Location of work areas, descriptions, estimated types and quantities of bird guano, feathers, body parts and carcasses are the responsibility of the contractor to field verify and confirm. If additional bird guano, feathers, body parts and carcasses are encountered, the CONTRACTOR shall notify the ARCHITECT immediately and be prepared to remediate the material.
- B. Handling, containerizing, packaging, re-handling, hauling and disposal of all items identified are to be included in the lump sum bid items of the contract.
- C. Pricing for the disinfection of the Barn surfaces described in 1.2 A. 5. may be submitted as a separate line item cost.

1.05 REGULATORY REQUIREMENTS

- A. The CONTRACTOR responsible for bird guano, feathers, body parts and carcasses remediation shall perform all work required to properly remove, clean and disinfect in accordance with all applicable Occupational Safety and Health Administration (OSHA), Department of Labor and Workforce Development (DLWD), Massachusetts Department of Environmental Protection (MADEP), etc. regulations and legally dispose of all bird guano, feathers, body parts and animal carcasses. The CONTRACTOR shall have demonstrated experience performing similar projects of the same size and nature as this project and have at least five years experience in bird dropping removal.

1.06 SUBMITTALS

- A. The CONTRACTOR shall submit each item in this Article according to the Conditions of the Contract and Section 01 30 00, for information only, unless otherwise indicated.
- B. Prior to the start of the remediation work, the CONTRACTOR shall prepare and submit to the ARCHITECT, the following listed items.
 - 1. Detailed plans showing the proposed methods for the cleaning/removal of bird guano, feathers, body parts and carcasses from all identified building areas and subsequent disinfection of the surfaces prior to the start of site work. This will include safety Data Sheets and product specifications and instructions for wetting agents and disinfectant products used.
 - 2. Detailed plans showing the proposed methods for the disinfection of interior Barn surfaces, including any special requirements for capture or disposal of wash water, as appropriate.
 - 3. Name(s) and qualifications of proposed Supervisors and Foremen.
 - 4. A detailed work schedule by area listing the proposed number, dates, and hours of each work shift, and work activities during each shift.

5. A statement documenting OSHA-specified medical exams for proper respiratory protection and details of any pre-existing conditions, for all proposed workers, by name.
 6. If applicable, lists of all permits, licenses, or manifests which will be applied for and used.
 7. Proposed waste haulers, and approved waste disposal landfill, including a copy of the state or local permit for said landfill.
- C. The following additional items may be requested for submittal and approval prior to or during the work:
1. Quality assurance records including safety, security, materials and personnel.
 2. Construction progress charts.
 3. Daily logs of workers and authorized visitors entering removal work areas.
 4. Layouts or sketches of changes to Decontamination Facilities, isolation barriers, warning signs, and HEPA-filtered exhaust systems.
 5. Safety Data Sheets and product specifications and instructions for wetting agents and disinfectant products used.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. All materials or equipment delivered to the site shall be unloaded, temporarily stored, and transferred to the work area in a manner, which shall not interfere with other operations at the site, or employees' access and safety.
- B. Unloading, temporary storage sites, and transfer routes must be approved in advance by the ARCHITECT.
- C. Damaged or deteriorated materials and equipment shall not be used and shall be promptly removed from the premises. Materials and equipment, which become contaminated with bird guano, feathers, body parts or carcasses, shall be thoroughly cleaned, or sealed in plastic bags or sheeting, and legally disposed of in an approved, secure landfill.
- D. All materials and equipment shall comply, at a minimum, with all sections of this specification, relevant federal, state, and applicable local codes, and industry standards.
- E. Bird guano, feathers, body parts and carcass removal and protection equipment shall meet the following minimum requirements.
 1. HEPA-Filtered Exhausts – The CONTRACTOR shall coordinate with the ARCHITECT to determine whether it is necessary to maintain the Barn under negative pressure with respect to the outdoors through the use of a High Efficiency

BIRD GUANO REMEDIATION

Particulate Air (HEPA) filtered exhaust system. This would be deemed necessary due to the proximity of the Barn to adjacent occupied building, work or recreational environments. If negative pressure is deemed necessary, then commercially manufactured HEPA-filtered exhaust units, with specification plates intact, should be provided for each work area to attain, at a minimum, four air volume changes per hour and an inward velocity of clean air into each work area at the Decontamination Facility of at least 100 feet per minute. The HEPA filter must be preceded by replaceable prefilters and the unit must be designed so that it cannot be operated unless all filters are in place. Flexible ducting shall be used to exhaust to the exterior of the Barn.

2. Wetting Agent— the CONTRACTOR is responsible for lightly wetting surfaces to minimize the raising of dust during removal of bird guano, feathers, body parts and carcasses using misting methods in order to avoid saturating wood surfaces with water. Hoses may not be used for wetting unless the water is dispersed through a spray device. As a health and safety measure, an antibacterial disinfectant (commercial ZEP or similar) shall be added to the wetting agent.
3. Disinfection Agent — the CONTRACTOR is responsible for providing all necessary materials and equipment for disinfection of Barn surfaces ONLY AFTER removal of bird guano, feathers, body parts and carcasses has been completed. Disinfection will be accomplished by power washing surfaces with a phenolic disinfectant solution or other approved method of application. The CONTRACTOR shall provide the planned approach for addressing the runoff from disinfectant washing activities.
4. Respiratory Protection Devices - shall be NIOSH approved and shall comply with all provisions of 29 CFR 1926.134, and all other applicable federal, state, or local codes and regulations.
5. Personal Protective Clothing and Equipment – including tight-fitting chemical goggles, disposable coveralls, rubber boots and other personal protective clothing and equipment shall comply with all provisions of 29 CFR 1926.134, and all other applicable federal, state, or local codes and regulations.

PART 3 - EXECUTION

3.01 INSPECTION OF EXISTING CONDITIONS

- A. The CONTRACTOR shall visit the premises and inspect all conditions, which may possibly affect the work contained in these specifications before submitting a bid. Failure of the CONTRACTOR to determine existing conditions and the nature and extent of the proposed work will not relieve him or her of responsibility for properly estimating the required effort or cost of successfully completing the project.
- B. The CONTRACTOR shall be trained in the recognition of lead paint and asbestos hazards and shall alert the ARCHITECT if any suspect materials are encountered in the course of the remediation or disinfection work.

3.02 WORKER PROTECTION AND SAFETY

A. General

1. The CONTRACTOR shall comply in all respects with the requirements pertaining to protection of worker health and safety. The requirements shall be closely monitored and strictly enforced by the CONTRACTOR throughout all work. Any deficiencies shall be promptly corrected or the CONTRACTOR shall stop work. This responsibility, and all protective items included in this section, apply to all of the CONTRACTOR's employees and workers during all the bird dropping/carcasses removal, cleanup and disinfection operations.

B. Respiratory Protection

1. Workers shall utilize personal protective respiratory equipment similar to asbestos or lead respiratory equipment.
2. Respirator Use - The CONTRACTOR shall ensure that all workers and approved visitors wear the required respiratory protection at all times while within a work area, or while performing any preparation, removal, disinfection or waste-handling task.
3. Respirator Types – At minimum respirators shall be provided with P100 filters. In addition, it may be helpful to also provide organic vapor or chemical respirator cartridges in line with the P100 filters to reduce chemical odors, provide that workers are properly trained in the limitations of such cartridges.
4. Training - The CONTRACTOR shall have a formal respirator training program that meets OSHA requirements (29 CFR 1910.134), and shall furnish documentation of the participation of each worker in this program to the ARCHITECT.
5. Approvals - The CONTRACTOR shall have a physician determine that each worker is capable of using respirators while performing the work required in this contract, and the CONTRACTOR shall provide a physician's certification of this fact to the ARCHITECT before employment of that worker on this project.

C. Protective Clothing

1. The CONTRACTOR shall provide all workers and approved visitors with disposable coveralls, head, foot and ear coverings, gloves, and eye protection (i.e., goggle with half-face respirators). Tight-fitting chemical goggles shall protect against exposure of the eyes to dust and wet splashes.
2. Use - All workers shall be required to wear all of the above protective clothing while in the work area.
3. During the disinfection stage of the work, workers shall be required to wear impervious protective clothing, including head, foot and ear coverings, rubber gloves taped at the wrist, rubber boots, tight-fitting eye protection and face shields for protection against splashes of the disinfectant solutions.

4. Disposal - Following each use, or whenever leaving the work area through the Decontamination Facility, workers shall remove all disposable clothing and place them in plastic bags designated for disposal. Footwear and safety goggles shall be kept in the Equipment Room until all work and materials are decontaminated.

3.03 APPROVAL OF THE WORK AREA PREPARATIONS

- A. After the work area has been prepared as specified, the CONTRACTOR shall request an inspection by the ARCHITECT. No removal or disturbance of bird guano, feathers, body parts or animal carcasses is to occur until the ARCHITECT has inspected and approved each prepared work area. Any deficiencies in the preparation work shall be promptly corrected in a manner satisfactory to the ARCHITECT.
- B. After bulk removal of the bird guano, feathers, body parts or animal carcasses is complete, the CONTRACTOR shall request an inspection by the ARCHITECT. The disinfection may not proceed until the ARCHITECT has inspected and approved the bulk removal. Any deficiencies in the bulk removal work shall be promptly corrected in a manner satisfactory to the ARCHITECT.

3.04 DECONTAMINATION FACILITY

- A. Description - Any person or thing exiting from the work areas must pass through a Decontamination Facility consisting of three separate, adjacent rooms separated by curtained entrances.
 1. An Equipment Room, with double-curtained doorway to the work area and airlock to the Shower Room, large enough for all workers to remove and dispose of contaminated protective clothing and for storage of any contaminated CONTRACTOR equipment.
 2. A Boot Wash-Disinfection Station containing disinfectant solution shall be installed at the entry to the equipment room. The depth of disinfectant solution at the boot wash-disinfectant station shall be sufficient to contact bird guano, feathers and other contaminants on the outside of the rubber boots. (The boot wash-disinfectant station may consist of a tub or kiddie pool that workers can step into prior to entering the equipment room). The rubber boots shall be stored in a designated area of the equipment room or if cleaned, at another suitable location.
 3. A Shower Room, with airlocks to the Equipment Room and the Clean Room, containing at least one watertight shower for workers or approved visitors, and a hose for cleaning equipment, waste containers, or other contaminated items to be removed from the area. If necessary, the CONTRACTOR shall provide a water heater with adequate capacity for hot showers, as required, for all workers.
 4. A Clean Room, with airlock to the Shower Room and double-curtained doorway to the outside containing storage facility for work and street clothing, uncontaminated protective clothing and equipment, and supplies of clean towels for use when exiting the Shower Room.

- B. Construction - Decontamination Facilities shall be constructed and maintained as specified for asbestos abatement and located in areas approved by the ARCHITECT in consultation with the CONTRACTOR.

3.05 WORK PRACTICES

- A. The CONTRACTOR shall erect temporary staging, containment barriers and decontamination facility as required for personnel decontamination procedures.
- B. Thoroughly clean all surfaces including walls, floors, stairs, doors, beams, support beams, cross members, columns, horizontal and vertical surfaces, sill areas around windows, in the ceilings, etc. and any other surfaces which are contaminated with bird guano, feathers, body parts or animal carcasses using shovels, scrapers and HEPA filtered vacuums to remove dust and debris. Use a wetting agent applied as a mist to minimize the release of airborne dust during removal. An antibacterial disinfectant (commercial ZEP or similar) shall be added to the wetting agent.
- C. Construct an access for transport of waste to the outside of the building. If appropriate, this access may be a chute or a hoist through an existing window as long as dust migration is controlled and applicable regulations are adhered to.
- D. Disinfection shall be conducted through washing (or other approved method) of all surfaces including walls, floors, stairs, doors, structural beams, columns and ceilings, etc., and any other surfaces from which bird guano, feathers, body parts and carcasses have previously been removed. Only disinfectant previously approved by the ARCHITECT shall be used. The CONTRACTOR shall follow all manufacturer's instructions and use the disinfectant at dilutions recommended by the manufacturer.

3.06 WORK APPROVALS

- A. Upon completion of all work in any defined work area, the CONTRACTOR and ARCHITECT shall conduct a final inspection for the purpose of certifying work completion. Unsatisfactory conditions shall be immediately corrected in a manner specified by ARCHITECT. Final payments shall be approved by the ARCHITECT only after the CONTRACTOR provides a certificate of completion and all properly completed waste disposal documentation forms are submitted.

3.7 NOTIFICATION OF HAZARD

- A. The CONTRACTOR shall immediately notify ARCHITECT by telephone followed by written notice of any risks of adverse health and safety, impacts on the environment, exposure of workers, facility employees, or the general public, or failure to comply with the specifications. The CONTRACTORS shall promptly notify ARCHITECT of the reason and required resolution of all observed deficiencies, and record them in ink in a hardbound notebook.

END OF SECTION