



**INVITATION FOR BIDS**

***"HUD" FUNDING TO PROVIDE ABATEMENT AND DEMOLITION SERVICES FOR THE WATERMAN GARDENS PROJECT – SAN BERNARDINO, CA***

***Project Number: #PC1005***

**Housing Authority of the County of San Bernardino (HACSB)  
715 E. Brier Drive  
San Bernardino, CA 92408**

**Contact Information**

**HACSB**

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**SWPPP**

**and**

**Observation Service**

CAL-Storm Compliance  
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**Asbestos & Lead Containing Survey Reports**

Ambient Environmental, Inc. John Payne February 4, 2018.

**Demolition Plan**

Ludwig Engineering Associates, Inc., 2017

**Construction Plans**

J. Dewey Harnish, Architect;  
March, Smith & Powell, Associate Architects 1942

**Date: February 6, 2018**



**TABLE OF CONTENTS**

- 1. PROCUREMENT AND CONTRACTING REQUIREMENT**
  - 1.1. INTRODUCTION**
  - 1.2. INVITATION FOR BID**
  - 1.3. REQUIRED DOCUMENTS**
- 2. GENERAL REQUIREMENTS – PART 1**
  - 2.1. SUMMARY OF WORK – DEMOLITION**
  - 2.2. WORK COVERED BY CONTRACT DOCUMENTS**
  - 2.3. PROTECT IN PLACE**
  - 2.4. WORK BY HACSB**
  - 2.5. AUTHORITY OF HACSB PROJECT MANAGER**
  - 2.6. CONSTRUCTION PLANS AND REPORTS**
  - 2.7. INTENT OF PLANS AND SPECIFICATIONS**
  - 2.8. RISK OF LOSS**
  - 2.9. ORDER OF THE WORK**
  - 2.10. SUPERINTENDENCE AND INSPECTION**
  - 2.11. APPLICABLE LAWS, RULES, AND REGULATIONS**
  - 2.12. PERMITS**
  - 2.13. SUBMITTALS**
  - 2.14. ACCESSIBLE AREAS**
  - 2.15. EXISTING CONDITIONS**
  - 2.16. LITTERING AND HOUSEKEEPING**
  - 2.17. PUBLIC PATHS AND TRAVEL WAYS**
  - 2.18. PROTECTION AND PUBLIC FACILITIES**
  - 2.19. SITE SECURITY**
  - 2.20. NOISE POLLUTION**
  - 2.21. AIR POLLUTION**
  - 2.22. FIRE PREVENTION AND HAZARDS**
  - 2.23. PRODUCTS**
  - 2.24. EXECUTION**
- 3. GENERAL REQUIREMENTS – PART 2**
  - 3.1. SUMMARY OF WORK – ASBESTOS ABATEMENT SECTION I**
  - 3.2. SUMMARY OF WORK – ASBESTOS ABATEMENT SECTION II**
  - 3.3. WORKER PROTECTION**
  - 3.4. PRODUCTS**
  - 3.5. EXECUTION**
- 4. LEAD ABATEMENT AND LEAD RELATED CONSTRUCTION WORK**
  - 4.1. GENERAL SUMMARY**
  - 4.2. PRODUCTS**
  - 4.3. EXECUTION**
- 5. STORMWATER**
  - 5.1. GENERAL – PART 1**
  - 5.2. MONITORING – PART 2**
  - 5.3. NUMERIC ACTION LEVEL – PART 3**
  - 5.4. TRAINING – PART 4**
  - 5.5. IMPLEMENTATION – PART 5**
- 6. ATTACHMENTS**

## **1. PROCUREMENT AND CONTRACTING REQUIREMENT**

### **1.1 INTRODUCTION**

The Housing Authority of the County of San Bernardino (HACSB) is one of the nation's most progressive and proactive housing authorities and the largest provider of affordable housing in the County. HACSB owns 2,514 affordable housing units located throughout the County of San Bernardino. We proudly serve in excess of 30,000 people, most of whom are seniors, disabled individuals, and children.

In 2008, the agency embarked on an agency wide strategic planning process with the following objectives: help clients achieve economic independence, ensure freedom of housing choice, and save tax payer dollars through efficient work. This has allowed us to enhance our work around our mission and service philosophy. Ultimately, our Mission of empowering all individuals and families in need to achieve an enriched quality of life by providing housing opportunities and resources throughout San Bernardino County is our top priority.

As we see the demand for affordable housing increase, the limited affordable housing supply we currently have available is not enough to house the thousands of families in need. As a developer of sustainable affordable and market rate housing, over the years we have expanded our housing stock in an attempt to meet the county's growing needs. Working diligently to acquire, build, and renovate properties, we incorporate the concept of mixed income communities, build utilizing green technology, and provide recreational and educational facilities for everyone's use.

Additionally, we are here as a stepping stone for families who need help building a foundation for a brighter future. Therefore, aside from providing housing, we assist our customers with ways of becoming economically independent. In collaboration with our partners, we provide: family/individual case management and counseling; career training and job placement; program integrity; homeownership assistance; college scholarships, to name a few.

We value our vendors and contractors as partners in our mission to empower all individuals and families in need to achieve an enriched quality of life by providing housing opportunities and resources throughout San Bernardino County.

### **1.2 INVITATION FOR BID**

The Housing Authority of the County of San Bernardino (HACSB) is accepting sealed bids from licensed and bonded Trade Contractors for the Waterman Gardens – Phase I and Alternate Phase II to provide demolition, abatement, removal and disposal services in the City of San Bernardino.

#### **PROJECT:**

The project consists of demolition of an existing public housing duplexes and four-plexes, abatement of materials containing asbestos and lead paint abatement. After abatement has been completed, debris, fixtures and appliances are to be removed and the structures are to be demolished.

Demolition to include:

- housing units
- clothes line frames and wire
- patio shade structures
- carports
- concrete block enclosures
- basketball court hoops, fencing
- baseball field fencing
- playground structure
- trees

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

Trees will be cut down, stumps to remain. All foundation, flatwork, streets, curbs, sidewalks, buried conduit, pull boxes, valve caps, hydrants, poles, and vegetation are to be protected in place.

Units are to be demolished "as-is" when Contractor moves onto site.

Connections to gas, cable, electrical and phone shall be removed, but most of the internal wiring and plumbing remains and must be removed and disposed of appropriately. Utilities through the slab will be blocked and plugged with concrete.

Bid includes mobilization, all labor, materials and equipment needed to complete the services, compliance with all regulations, and stabilization of the disturbed soil at the end of the project.

It is the responsibility of the Contractor to review and **verify all quantities and existing conditions in the field**, in addition to meeting all regulatory requirements, obtain all required permits and documents.

NOTE: Funding for this project is through the United States Department of Housing and Urban Development (HUD) and is subject to all HUD requirements.

Bidders are required pursuant to California Business and Professions Code 7028.15 to hold a valid State Contractor's License as classified in Public Contract Code Section 3300 at the time the contract is awarded. Bidders shall conform to California Business and Professions Code 7059 for Specialty Contractor's Licensing Provisions. Certification is contained in the Bid Form. Prime Bidders must possess the following classification(s) of contractor's license for each Bid Package listed below:

1. **A or B License, self performs demo & abatement, holds C-22\* license.**
2. **A or B License**
  - a. **Subcontract all work to licensed trades C-21 & C-22\***
3. **A or B License, self performs demo, holds C-21 license**
  - a. **Subcontracts abatement work to licensed C-22\* contractor.**
4. **A or B License, self performs abatement, holds C-22\* license**
  - a. **Subcontracts demo work to licensed C-21 contractor.**

Note:\*All C-22 are required to comply with Business & Professions Code, Division 3, Chapter 9. Contractors, Article 4, in regards to Classification Certifications.

### **Estimate for Demo I & II: \$ 1,216,000**

The Contractor is responsible for the performance and completion of all items in the Scope of Work. The Contractor shall coordinate all work and shall cooperate with the HACSB Project Manager as necessary to ensure progress and timely completion of the Work.

**Estimated duration of the contract is 127 WORKING DAYS.** Start date for Project will be given through a Notice to Proceed letter. Working hours for this project will be 7:00am to 6:00pm Monday through Friday. Liquidated damages in the amount of **\$1,000 per day** will be assessed for this project if it is not completed within 127 working days from notice to proceed.

Davis-Bacon Prevailing Wages will be required to be paid for all work performed under this Invitation for Bids. Current Wage Determinations may be obtained directly from the website at <http://www.wdol.gov/>. It shall be mandatory upon the Contractor to whom any contract is awarded and upon any Subcontractor under him to pay not less than said specified prevailing rates to all laborers and mechanics employed by them in the execution of the contract.

The Contractor should use the Davis Bacon Wage Rates for trades for pricing their bid. The wage Determination may be found at <http://www.wdol.gov/> . **The current wage determination is: CA180028 01/26/2018 MOD3.**

This project is subject to compliance monitoring and enforcement by HUD Handbook 1344.1 Chapter 8. Submission of certified payroll will be done through LCP Tracker.

**There will be a MANDATORY PRE-BID CONFERENCE & JOB WALK on Wednesday, February 21, 2018 at 9:00 AM; at the job site 616 Orange Street, San Bernardino, CA (northeast corner of the intersection of Crestview and Orange). **Safety vests, safety boots, and hard hats are required for the job walk.****

**ALL BIDS ARE DUE by Thursday, March 8, 2018 at 10:00 AM.** Sealed bids are to be delivered or mailed to:

Attn: Claudia Nunez, Procurement Department  
Housing Authority of the County of San Bernardino  
715 E. Brier Drive  
San Bernardino, CA 92408

The work shall consist of the provision of all permits, materials, labor and equipment to perform the complete work as identified in the Scope of Work for this bid. Contractor will be responsible for following all items addressed in the Scope of Work, specifications, and all applicable laws, codes, regulations and any manufacturer's recommendations.

**No oral requests for clarification** will be accepted. All such requests must be in writing via email to [cnunez@hacsb.com](mailto:cnunez@hacsb.com) no later than **10:00am PST on February 26, 2018**. All questions and clarifications will be posted by 4pm on February 28, 2018 on our website [www.hacsb.com](http://www.hacsb.com).

It is the HACSB's intent to award a single contract to the lowest responsive bidder based on the total bid amount for the scope of all the work.

It is the contractor's responsibility to submit all necessary documents included with the bid package including the use of the supplied bid bond form. Bid Guarantee (for contracts in excess of \$25,000) by the bidder in accordance with policy 2 CFR §200.325 Bonding Requirements, which states: "A bid guarantee from each bidder equivalent to five percent (5%) of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified."

### **1.3 REQUIRED DOCUMENTS**

The following items are statutory requirements for each bidder and those marked with an asterisk are to be submitted with the bid. Signatures, and/or initials, are required. If any of the required items are not submitted, incomplete, or submitted on any other form other than those provided, the bid will be considered non-responsive and will be disqualified. All of these forms are available on the HACSB website at [www.hacsb.com](http://www.hacsb.com) on the "Business" page under "Procurement Forms" and attached hereto as attachments and incorporated herein by reference.

1. Instructions to Bidders for Contracts (HUD 5369)
2. Representations, Certifications, and Other Statements of Bidders (HUD 5369-A)\*
3. General Conditions for Construction Contracts (HUD 5370A)
4. Statement of Bidder's Qualifications\*
5. Designation of Subcontractors\* (if applicable)
6. Certification for Business Concerns Seeking Section 3 Preference\*
7. Certification of Bidder Regarding Equal Employment Opportunity\*
8. Certification of Bidder Regarding Minority/Women's Business Enterprise\* (if applicable)
9. Corporate Certification\* (applicable to corporations only)

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Waterman Gardens - Abatement & Demolition Services

10. Minority Code Identification Form\*
11. Non-Collusion Affidavit Form\*
12. Bid Proposal Form\* (included in this document)
13. Bid Guarantee\* (for contracts in excess of \$25,000) by the bidder in accordance with the Instructions to Bidders for Contracts, which states: "All bids must be accompanied by a negotiable bid guarantee, which shall be not less than five percent (5%) of the amount of the bid". The Bid Guarantee shall be submitted by each bidder with the bid. Use of a standard surety company's form for the Bid Bond is permitted.
14. Contractor's Certification of Compliance/Davis-Bacon and Related Act Requirements\*
15. Supplementary Conditions of the Contractor for Construction (HUD92554M)
16. Agreement Certification\*

The following items are required of the apparent low bidder **once determined**:

1. Valid State of California contractor's License, Class A, B or appropriate specialty contractor's license
2. Certificate of Worker's Compensation Insurance
3. Certificate of Liability Insurance, minimum policy coverage of \$3,000,000.00 with the HACSB named as an additional insured on the policy. See proposal form for additional coverage requirements.
4. Environmental Liability: \$500,000; per occurrence and aggregate; HACSB Additional Insured.
5. Certificate of Automobile Liability Insurance, minimum policy coverage of \$500,000.00 with the HACSB named as an additional insured on the policy.
6. Stipulation of Lien.
7. Warranty/Guarantee.
8. 100 % Performance/Payment Bond.

Bidders shall inform all proposed subcontractors that they will be required to submit similar items within 72 hours if requested by HACSB.

Bidder's attention is directed to the provision for Equal Employment Opportunity and payment for all persons of not less than the minimum wages as set forth in the attached Federal Wage Requirements. This is a Davis Bacon project and Federal Regulations will be enforced.

No bid shall be withdrawn for a period of one hundred twenty (120) days subsequent to the opening of the bids without the consent of the HACSB.

Additional requirements may be imposed as necessary to satisfy all statutory requirements which may attach to the work needed to be performed. The HACSB reserves the right to reject any or all bids, to accept the bid best suited to its needs, or to waive any non-statutory informality in the bidding.

## **2. GENERAL REQUIREMENTS – PART 1**

### **2.1. SUMMARY OF WORK – DEMOLITION**

- 2.1.1. Demolition of 41 structures totaling 92 units and miscellaneous features, between Demo phases I & II.
- 2.1.2. Lead and asbestos abatement
- 2.1.3. Tree Removal
- 2.1.4. The successful bidder will submit a Contractor's Waste Management and Recycling Plan prior to the commencement of the work. All work will be performed in accordance to the Recycling of Waste per City of San Bernardino Municipal Code, and CAL/EPA, Title 22 CCR Disposal and Transportation of Hazardous Waste
- 2.1.5. Shut off water at street valve and cap for each per building. If existing water shut-off valves are not operable, contractor is responsible to replace valve.

- 2.1.6. Transportation of waste disposal to appropriate and certified facilities based upon waste type
- 2.1.7. Site Clean-up
- 2.1.8. Compliance with Storm Water Pollution Prevention Plan
- 2.1.9. Site Security

## **2.2. WORK COVERED BY CONTRACT DOCUMENTS**

- 2.2.1. Installation of security fencing as directed by the HACSB Project Manager and maintenance of security fencing though out the demolition.
- 2.2.2. Demolition of designated units – see attached construction plans. Demolition to include the removal of all features above the slab foundation. Slabs, streets, driveways, curbs, gutters and lights are to remain. Prior to demolition, abatement work for lead, asbestos, and if present mercury and Freon is required. Demolition for purposes of this contract will include all elements above the slab regardless of nature including utilities, plumbing, electrical wiring, trash, and any other items found.
- 2.2.3. Miscellaneous demolition of components outside of the building exterior consists of concrete block enclosures, patio shade structures, carports, clothes line frames, basketball court hoops and fencing, playground play structure and baseball field fencing. Additionally, trees defined within the general boundary of a demolished building will also be removed, providing a clear cut down to the stumps.
- 2.2.4. Contractor will be responsible for the un-boarding of all units, including the removal of such plywood.
- 2.2.5. Demolition and removal of other miscellaneous features as directed by the HACSB Project Manager is included.
- 2.2.6. The demolition includes the removal, transport, and fees of said material to the appropriate waste receiving center or recycling center as determined by the Contractor's submitted and approved recycling plan.
- 2.2.7. Sewer and water lines will be capped and plugged, flush with concrete foundation.
- 2.2.8. Compliance with Regional Water Quality Control Board (RWQCB) and South Coast Air Quality Management District (AQMD) as well as State, Federal, and local regulations and ordinances are required including obtaining SCAQMD Abatement and Demolition permits and fees.
- 2.2.9. Contractor will follow and abide with local ordinances of the City of San Bernardino.
- 2.2.10. Removal of lead and asbestos materials – see attached reports for each including guidelines for removal and disposal.
- 2.2.11. Removal and disposal of appliances and other items that may contain refrigerants in accordance with 40 CFR, Part 82. Appliances and other items that may contain refrigerants include, but are not limited to, refrigerators, freezers, dehumidifiers and portable or central air conditioners.
- 2.2.12. Manifests or certifications for appropriate disposal and recycling are required for all components disposed of or recycled.
- 2.2.13. If present, remove and legally dispose of mercury-containing materials including florescent, high pressure sodium, mercury vapor, metal halide light bulbs, and thermostats containing a liquid filled capsule. PCB-containing materials include capacitors, ballast, and transformers where the component is contained within a metal jacket and does not have a specific, legible label stating no PCB's are present.
- 2.2.14. At no time shall any debris be burned or buried on site or used as backfill.
- 2.2.15. Contractor shall obtain all necessary permits, and pay applicable fees. Permits shall be on-site prior to starting demolition. Provide copies of the permits to the HACSB.
- 2.2.16. Provide the HACSB Project Manager with documentation or certification of appropriate disposal from receiving facility.
- 2.2.17. The Contractor shall develop his own source for temporary water and power as needed in order to perform the work.

- 2.2.18. San Bernardino County Fire may wish to engage in training exercises in vacant, abated buildings. With advance notice, HACSB will schedule such training exercises with contractor's schedule.

### **2.3 PROTECT IN PLACE**

- 2.3.1. Within the demolition foot print, the following features are to be protected and to remain in place:
- 2.3.1.1 Foundation slab of each duplex
  - 2.3.1.2 Patio slabs
  - 2.3.1.3 Driveways, streets and curbs
  - 2.3.1.4 Existing vegetation
  - 2.3.1.5 Any item not listed for demolition including buried facilities and buried utilities.
  - 2.3.1.6 Exterior common area lighting

### **2.4 WORK BY HACSB**

- 2.4.1. Provide current WDID and EPA ID numbers
- 2.4.2. Provide address list, construction plans for existing units, demolition plans, specifications, asbestos reports, lead reports, and storm water pollution prevention plans.
- 2.4.3. Ensure work area is vacated of all residents.
- 2.4.4. Ensure all utility wires to the buildings have been removed.
- 2.4.5. Current security lighting is made available to the Contractor.
- 2.4.6. Provide third party monitor per abatement requirements.
- 2.4.7. Provide adequate access to the site for demolition, mobilization, and Contractor employee parking.

### **2.5 AUTHORITY OF THE HACSB PROJECT MANAGER**

- 2.5.1. All questions that should arise as to the quality or acceptability of materials and work performed and as to the manner of performance and rate of progress of the work will be decided by the HACSB Project Manager. All questions which may arise as to the interpretation of the plans and specifications, as to the acceptable fulfillment of the contract on the part of the Contractor, and as to the compensation shall be decided by the HACSB Project Manager whose decision is final.

### **2.6 CONSTRUCTION PLANS AND REPORTS**

- 2.6.1. The construction plans and reports furnished consist of general information and details to give a comprehensive idea of the construction contemplated.
- 2.6.2. The project site is in an "existing condition" and therefore it is prudent and required upon the Contractor to compare the "existing condition" to the construction plans and implement a demolition plan accordingly.

### **2.7 INTENT OF PLANS AND SPECIFICATIONS**

- 2.7.1. The intent of the plans and specifications is to prescribe the details for the demolition and completion of the work which the Contractor undertakes to perform in accordance to the terms of the contract. Where the plans or specifications describe portions of the work in general terms, but not in complete details, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used.

### **2.8 RISK OF LOSS**

- 2.8.1. The Contractor shall accept the site in its present condition and shall inspect the site for its character and type of structures to be demolished. The HACSB assumes no responsibility for the condition of existing buildings, structures and other property within the demolition area, or the condition of the property before or after the solicitation of proposals. No adjustment of proposal price or allowance for any change in conditions that occurred after the acceptance of the lowest responsible, responsive proposal will be allowed.



## **2.9 ORDER OF THE WORK**

- 2.9.1. Deliver all notifications as required.
- 2.9.2. Obtain all permits, including, prepare and submit to the City of San Bernardino for approval the Construction & Demolition and Recycling Plan (CDRP Plan).
- 2.9.3. Provide copies of all permits to HACSB Project Manager's prior to beginning any demolition.
- 2.9.4. Prepare and submit to HACSB Project Manager a Safety Plan for the project.
- 2.9.5. Owner reserves the right to dictate order and progression of work.
- 2.9.6. Include a project schedule in Microsoft Project, including weekly updates.

## **2.10 SUPERINTENDENCE AND INSPECTION**

- 2.10.1. The Contractor shall designate in writing before starting work, an authorized representative who shall have the authority to represent and act for the Contractor. This representative shall be proficient in speaking and writing English.
- 2.10.2. The authorized representative **shall be present** on the site, at all times while the work is actually in progress on the contract. When work is not in progress and during periods when work is suspended, arrangements acceptable to the HACSB Project Manager shall be made for any emergency work which may be required.
- 2.10.3. The HACSB Project Manager or his / her representative shall at all times, have safe access to the work for the purposes of inspection. The HACSB's inspection of the work does not relieve the Contractor of any of the Contractor's obligations to fulfill the contract.
- 2.10.4. If any subcontractor or person employed by the Contractor appear noncompliant with the contract documents or the safety plan, the HACSB's Project Manager or representative shall have the right to discharge that subcontractor or person immediately and that subcontractor or person shall not be employed again for the remaining performance of this contract.

## **2.11 APPLICABLE LAWS, RULES, AND REGULATIONS**

- 2.11.1. The following laws, rules, and regulations listed herein are for the Contractor's reference. Nothing within the contract documents shall relieve the Contractor of his responsibilities to be in full compliance with all applicable laws, rules, and regulations whether specifically mentioned or not mentioned.
  - 2.11.1.1. California Occupational Safety and Health Act (CAL/OSHA) Title 8, California Code of Regulations (CCR)
  - 2.11.1.2. California Air Resources Board Ambient Air Quality Standard, Title 24
  - 2.11.1.3. California Department of Public Health, Title 17 CCR
  - 2.11.1.4. CAL/EPA, Title 22 CCR Disposal and Transportation of Hazardous Waste
  - 2.11.1.5. HUD – Title X, Residential Lead-Based Paint Hazard Reduction Act of 1992
  - 2.11.1.6. HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards as published in the 2nd Edition July 2012
  - 2.11.1.7. California Labor Code, Division 5, Part 1 as it pertains to safety in employment and with the applicable provisions of the Title 8, CCR as it pertains to the Occupational Safety and Health in the work place.
  - 2.11.1.8. State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination Systems (NPDES) General Permit No. CAS000002, "Storm Water Discharge Associated with Construction Activity and Land Disturbance Activities" ("Permit"), Amended by 2010-0014-DQ and 2012-006-DWQ.

## **2.12 PERMITS**

- 2.12.1. The following list of permits are listed for the Contractor's reference. The Contractor shall obtain all permits necessary to legally perform the contracted scope of work.
  - 2.12.1.1. Demolition Permit from the City of San Bernardino.
  - 2.12.1.2. CAL/OSHA permit and CAL/OSHA notification prior to the start of any work.

- 2.12.1.3. Proof of notification of the South Coast Air Quality Management District.

### 2.13 SUBMITTALS

- 2.13.1. The Contractor shall submit the following forms and applications to the appropriate authorities and shall provide copies to the HACSB Project Manager upon approval. These applications and forms shall be submitted and approved prior to the Contractor beginning any demolition work.
- 2.13.1.1 Per "City of San Bernardino Waste Enclosure Ordinance", the Contractor shall submit for review and approval a complete CDRP.
- 2.13.1.2 City of San Bernardino Application for Demo Permit – Approved Route for Trucks.
- 2.13.1.3 South Coast Air Quality Management District "Rule 1403 Form Notification of Demolition or Asbestos Removal". Note: This form must be filled out separately for each activity of demolition and asbestos removal.
- 2.13.2. Per the approved Storm Water Pollution Prevention Plan, the Contractor shall comply with all submittal requirements.
- 2.13.3. Landfill record reporting via receipt or acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
- 2.13.4. Contractor shall prepare at his own expense a CDRP for the City of San Bernardino approval. The components of this plan shall include but not be limited to:
- 2.13.4.1. Schedule of demolition activities which indicate a detailed sequence of the selective demolition and removal work with starting and ending dates for each activity.
- 2.13.4.2. Indicate how the Contractor proposes to **recycle at least 65%** of the construction and demolition wastes for reuse.
- 2.13.4.3. Indicate a list of reuse facilities, recycling facilities and processing facilities that will be receiving the recovered materials including re-sale.
- 2.13.4.4. If some of the materials will be donated or sold, describe the process and identify the organizations that may receive the materials.
- 2.13.4.5. Identify the materials that are not recyclable or not recovered which will be disposed of in a landfill (or other means acceptable by the State of California and local ordinance and regulations) and explain why the materials are not recovered.
- 2.13.4.6. List the permitted landfill, or other permitted disposal facilities that will be accepting the disposed waste materials.
- 2.13.4.7. Indicate instances or situations where compliance with the requirements of this specification do not apply or do not appear to be possible.
- 2.13.4.8. Prepare a worker safety plan, assessment of building condition and all potential hazards.
- 2.13.4.9. Provide a final accounting of disposition of recovered materials upon completion of the project.
- 2.13.4.10. Provide the HACSB Project Manager with delivery receipts for the recycled / disposed materials and waste sent to permitted recycling facilities, processing facilities, or landfill with the following information:
- 2.13.4.10.1. Name of firm accepting the recovered materials or waste disposed materials.
- 2.13.4.10.2. Specify type of facility (retail facility, recycler, processor, Class III landfill, MRF)
- 2.13.4.10.3. Location of the facility
- 2.13.4.10.4. Type of Materials
- 2.13.4.10.5. Date of Delivery

### 2.14 ACCESSIBLE AREAS

- 2.14.1. The Contractor shall have full site of the demolition area as shown on the attached plans.
- 2.14.2. The Contractor's access to the demolition area shall be via Orange Street and Crestview Avenue.

- 2.14.3. The Contractor, subcontractors, and all employees shall not interact with or enter into the resident area of the Waterman Gardens complex. This area is further described as being bounded by Waterman Avenue on the west, Baseline Street on the north, La Junta Street on the east, and Olive Street on the south.

## **2.15 EXISTING CONDITIONS**

- 2.15.1. The existing buildings are in varying degrees of condition and damages including some fire damage.  
2.15.2. The miscellaneous components to be removed from each unit vary in composition and quantity.

## **2.16 LITTERING AND HOUSEKEEPING**

- 2.16.1. The Contractor shall be responsible for keeping the site clean on a daily basis and for removing any demolition debris, litter, or other loose material resulting from the execution of the demolition work. Any cost incurred by the HACSB to keep the site clean shall be charged to the Contractor and deducted from the funds due for the work.  
2.16.2. Littering of the site shall not be permitted  
2.16.3. All waste will be stored on site in an acceptable container appropriate for the type of waste or hauled off the site daily.

## **2.17 PUBLIC PATHS AND TRAVEL WAYS**

- 2.17.1. Units listed in DEMO V (shown in green on the demo map) will REMAIN OCCUPIED THROUGHOUT DEMO.  
2.17.2. Full street access and pedestrian circulation shall be provided to the residents.  
2.17.3. Existing sidewalks shall be open at all times during construction.

## **2.18 PROTECTION OF PUBLIC FACILITIES**

- 2.18.1. The Contractor shall take all necessary precautions to avoid any damage to streets within in the right of way including abutting sidewalks, and ADA ramps. Any intentional damage to these facilities will be repaired by the Contractor at no additional cost to the HACSB. The repairs will return said facilities to their pre-damaged condition.  
2.18.2. The Contractor shall take all necessary precautions to avoid any damage to existing public utilities such as fire hydrants, street lights, traffic signals, power poles, telephone poles, fire alarm boxes, underground utilities or other appurtenances in the vicinity of the demolition site.  
2.18.3. The Contractor shall pay for temporary relocation of utilities as necessary, which are relocated at the Contractor's request for his convenience.  
2.18.4. Existing property line block walls to remain protected in place.

## **2.19 SITE SECURITY**

- 2.19.1. Full site security is the responsibility of the Contractor and the Contractor shall assume whatever means are necessary to ensure site security and safety. This may require the Contractor to install necessary fencing before any demolition work and not remove said fencing until the completion of all demolition.  
2.19.2. Until the acceptance of the contract, the Contractor shall have the charge and care of the work and all materials and equipment used therein for the contract. The Contractor shall bear full risk of injury, loss or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries, losses or damages to any portion of the work of the materials occasioned by any cause before its completion and acceptance and shall bear the expense thereof.  
2.19.3. Where necessary to protect the work or materials from damage, the Contractor shall, at the Contractor's expense, provide suitable precautions to protect the work or materials from damage. The suspension of the work from any cause whatever shall not relieve the Contractor of the responsibility for the work and materials as herein specified.

## **2.20 NOISE POLLUTION**

- 2.20.1. All construction equipment used in conjunction with this project shall be in good repair and adequately muffled. The Contractor shall comply with any noise pollution requirements of the City of San Bernardino, South Coast Air Quality Management District (AQMD), and California Air Resource Board (CARB).

## **2.21 AIR POLLUTION**

- 2.21.1. The Contractor shall comply with applicable air pollution control requirements of the AQMD and CARB. The Contractor shall take appropriate actions to minimize atmospheric pollution and prevent particulate matter from becoming airborne. Such reasonable precautions shall include but not limited to:
- 2.21.1.1. The use of water or chemicals for control of dusts in the demolition of existing buildings, structures, miscellaneous demolition, construction operations, and clearing or removal of debris.
- 2.21.1.2. Transports trucks shall be covered when moving to prevent loss of debris or dust.

## **2.22 FIRE PREVENTION AND HAZARDS**

- 2.22.1. Before demolition of any part of any building, the Contractor shall remove all volatile or flammable materials, such as gasoline, kerosene, benzene, cleaning fluids, paints or thinners in containers, and similar substances.
- 2.22.2. The Contractor shall be responsible for having and maintaining the correct type and class of fire extinguishers on site. A fire extinguisher shall be provided every 50'.
- 2.22.3. When a cutting torch or other equipment that might cause a fire is being used, a fire blanket and fire extinguisher shall be placed close at hand for instant use.
- 2.22.4. No fires of any kind will be permitted on the HACSB property or demolition site.
- 2.22.5. The Contractor shall arrange for access to and use of during working hours one or more telephones in the vicinity of the work site for the purposes of making calls in case of fire or other emergencies. The Contractor's Superintendent and all personnel on site shall be adequately trained as to the location, use of, and have access to the phone for the purposes of reporting emergencies.

## **2.23 PRODUCTS – NOT APPLICABLE**

## **2.24 EXECUTION**

### **2.24.1 DEMOLITION NOTICE**

- 2.24.1.1 The Contractor shall be responsible for providing to the HACSB's Project Manager with a minimum of 72 hours advance notification prior to beginning the execution of demolition of any structure. All requirements are to be completed before starting work or demolition.

### **2.24.2 SALVATION OF DEMOLITION MATERIALS**

- 2.24.2.1 All buildings, building materials, and components within buildings, and all other designated elements for demolition shall become the property of the Contractor and shall be removed from the premises at once. Salvaged materials shall be removed immediately from the premises.
- 2.24.2.2 The Contractor is to submit a CDRP which shows compliance with City of San Bernardino and State of California standards. A recycling minimum of 65% is required for this contract. The Contractor shall obtain such documentation to demonstrated recycling and submit said documentation consisting of manifests, weight tickets, or receipts to the HACSB Project Manager.

### **2.24.3 DEMOLITION AND REMOVALS**

- 2.24.3.1 No wall or part thereof shall be permitted to fall outwardly from any building except through chutes or by other controlled means of methods which will ensure safety and minimize dust,

noise and other nuisance.

- 2.24.3.2 Any part of the building, whether structural, collateral, or accessory which has become unstable through removal of other parts, shall be removed as soon as practicable, and no such unstable part shall be left free-standing or inadequately braced against all reasonably possible causes of collapse at the end of any day's work.
- 2.24.3.3 The foundation floors, slabs, driveways, and elements comprising the streets such as the street, curbs and gutters, street lighting, roadway signs, underground utilities, and any other miscellaneous street component are to be protected in place. If any protected element is damaged, the Contractor shall repair said element to its pre-damaged condition.
- 2.24.3.4 The Contractor shall remove miscellaneous contents of the duplexes as well as miscellaneous features on the exterior of the duplexes. These miscellaneous components consist of:
  - i. Appliances which may or may not contain refrigerant
  - ii. Thermostats which may or may not contain mercury
  - iii. Concrete block enclosures
  - iv. Patio shade structures
  - v. Carports
  - vi. Clothes line frames and wiring
  - vii. Selected tree removal. Stumps shall be left in place.
  - viii. Plumbing, electrical, and mechanical components typical of a housing unit that may still be present.
- 2.24.3.5 Some objects may be partially buried. Objects listed in "D" above which are partially buried will be removed in their entirety including all portions below ground. The remaining void shall be filled with native soil and compacted in place.
- 2.24.3.6 In addition to tree cutting and clearing, the Contractor shall remove all dead branches, limbs, leaves, trash, loose vegetation material, and other debris whether fallen or not. This section is for the purposes of clearing the site and leaving the site clean at the end of the demolition. This section is not intended for vegetation removal consistent of vegetation clearing.
- 2.24.3.7 Fasteners and connections between the walls and the foundation shall be removed or cut flush with the foundation slab. Vertical appurtenances shall not be left in place.
- 2.24.4 UTILITY PLUGGING
  - 2.24.4.1 Prior to commencing any demolition work, the Contractor shall verify that all utilities have been disconnected.
  - 2.24.4.2 The sewer lines are to be capped flush with the slab foundation. HACSB representative will approve cap material / method.
  - 2.24.4.3 Water lines are to be shut-off, per building at valves located at street and lines capped. If existing valves are found not be operable, contractor is to replace shut-off valve.
- 2.24.5 DISPOSAL OF DEMOLITION DEBRIS AND SOLID WASTE
  - 2.24.5.1 All materials, rubbish, and trash shall be removed from the demolition area leaving the site free of debris. Any cost incurred by the HACSB to perform such cleaning up of debris or materials left behind shall be deducted from the funds due to the Contractor under this contract.
  - 2.24.5.2 Waste may or may not include the disposal of tires.
  - 2.24.5.3 All debris and solid waste shall be delivered by the Contractor to a designated disposal facility, or to an approved disposal facility licensed in accordance with the state and / or local regulations, laws, and zoning. The Contractor shall be responsible to pay all fees for waste disposal. The Contractor shall submit to the HACSB's Project Manager copies of all disposal tickets for each element or component demolished. The cost of disposal fees shall be considered incidental to the demolition.
- 2.24.6 ASBESTOS ABATEMENT
  - 2.24.6.1 The handling of asbestos material is subject to all applicable state and federal mandates. Asbestos removal will be removed by a licensed abatement Contractor.
- 2.24.7 LEAD ABATEMENT

2.24.7.1 The handling of Lead material is subject to all applicable state and federal mandates. Lead removal will be removed by a licensed abatement Contractor.

**2.24.8 FREON REMOVAL AND DISPOSAL**

2.24.8.1 The handling of Freon containing appliances, if present, is subject to all applicable state and federal mandates and regulations. The Contractor shall be responsible for the identification, and removal and disposal of the material in accordance with applicable regulations. All costs associated with said removal and disposal shall be considered incidental and shall be included in the lump sum bid for demolition.

**2.24.9 PCB AND MERCURY REMOVAL AND DISPOSAL**

2.24.9.1 The handling of any fluorescent lighting fixtures and ballasts containing PCB or mercury is subject to all applicable state and federal mandates and regulations. The Contractor shall be responsible for the removal and disposal of the material in accordance with applicable regulations. All costs associated with said removal and disposal shall be considered incidental and shall be included in the lump sum bid for demolition.

**2.24.10 BACK FILL AND CLEAN UP**

2.24.10.1 All excavations shall be backfilled with acceptable material free of debris and organic material. Compaction should be at a rate to minimize settling of the backfilled area.

2.24.10.2 The Contractor shall employ hand labor where the use of power machinery is unsafe or unable to produce a finished job. Hand labor shall also be used to clean the site of any debris.

2.24.10.3 Before acceptance of the demolition work, the Contractor shall remove all unused material and rubbish from the site of the work, remedy any objectionable conditions the Contractor may have created on the property, and leave construction site neat and presentable condition.

2.24.10.4 Contractor is to prevent erosive runoff and sediment transport from the project site using the approved Storm Water Pollution Prevention Plan.

2.24.10.5 Final cleanup is subject to the approval of the HACSB Project Manager.

**2.24.11 SAFETY AND FENCING**

2.24.11.1 The Contractor shall comply with all applicable current federal, state, and local safety and health regulations.

2.24.11.2 Contractor to provide temporary fencing, while taking reasonable precautions to ensure safety.

2.24.11.3 The safety fencing shall remain in place until the contract completion has been accepted by the HACSB's Project Manager.

2.24.11.4 The Contractor shall make any repairs, modifications, or changes to the site fencing at the direction of the HACSB Project Manager. Such repairs, modifications, or changes are considered incidental to the cost of demolition and no separate payment shall be made.

2.24.11.5 Contractor shall ensure that all required signage is posted and visible on fencing.

**2.24.12 REQUIRED POSTINGS**

2.24.12.1 The Contractor shall post the State of California Health and Human Services Agency Department of Public Health Abatement of Lead Hazard Notification Form 8551 and all other required notices at entrances to work area and structures at all times.

**3. GENERAL REQUIREMENTS – PART 2**

**3.1. SUMMARY OF WORK – ASBESTOS ABATEMENT SECTION I**

**3.1.1 DESCRIPTION**

Work included - Base Bid: Contractor shall furnish all labor, materials, services, permits, insurance (specifically covering the handling and transportation of Asbestos-Containing Material, Asbestos-Containing Construction Material and Asbestos-Containing Waste Material), and equipment which is specified, shown, or reasonably implied for the following Asbestos Abatement activities:

**NOTE: IT IS THE RESPONSIBILITY OF THE ABATEMENT CONTRACTOR TO VERIFY ALL**

**QUANTITIES AND CONDITIONS IN THE FIELD PRIOR TO BIDDING.**

- 3.1.1.1 The removal and disposal, of the following friable Asbestos-Containing Floor tile mastic and Roof Penetration mastic as non-hazardous waste with no replacement of removed material(s):
  - 3.1.1.1.1 All interior plaster (See Survey Report)
  - 3.1.1.1.2 All interior 12x12 and 9x9 vinyl floor tile and mastic. (See Survey Report)
  - 3.1.1.1.3 All various roof products (flashing and penetration mastic materials.) (See Survey Report)
  - 3.1.1.1.4 All Transite Pipe (See survey report)
- 3.1.1.2 Submit unit pricing for the removal and disposal of any other additional friable and non- friable Asbestos-Containing Materials as may be required by the general contractor.
- 3.1.2 WORK NOT INCLUDED IN THE CONTRACT DOCUMENTS
  - 3.1.2.1 Area air monitoring for Owner, a.k.a. HACSB, by Observing Service.
- 3.1.3 EXISTING CONDITIONS
  - 3.1.3.1 Existing conditions are reflected correctly to the best of Owner's knowledge. Should minor conditions be encountered which are not exactly as indicated, modification to new work shall be made as required at no additional expense to Owner.
  - 3.1.3.2 Observation Service and Owner make no representation, warranty, or guarantee that the conditions indicated by the test reports either are representative of those conditions existing throughout the area, or that unforeseen developments may not occur, or that materials other than, or in proportions different from those indicated may not exist.
  - 3.1.3.3 Contractor is advised that the locations of all asbestos-containing materials may not be clearly known and that he shall proceed with caution in all phases of the Work. Additional asbestos-containing material may be uncovered during the course of the Work and Contractor may be directed by Owner to include this material in the Work at an agreed upon price.
- 3.1.4 PHASING
  - 3.1.4.1 Will be at the direction of the HACSB or their Designated Representative.
- 3.1.5 STORAGE
  - 3.1.5.1 Hazardous waste and equipment shall be stored at all times in a covered, secured and labeled containers located at a place onsite identified by the HACSB.
- 3.1.6 BUILDING OCCUPANCY AND ACCESS RESTRICTIONS
  - 3.1.6.1 HACSB may occupy other portions of the facility and shall conduct normal business operations during the abatement operations. Coordinate work with Owner and conduct activities so as to minimize disruption to the building occupants.
  - 3.1.6.2 No abatement work will be performed in occupied buildings unless directed by HACSB.
- 3.1.7 WORKING DAYS AND HOURS
  - 3.1.7.1 All work hours shall be approved by HACSB prior to project starting. (Monday through Friday 0700 Hrs. to 1800 Hrs.)
  - 3.1.7.2 Asbestos abatement work will be performed as pre-approved by HACSB.
  - 3.1.7.3 Asbestos-free work will be allowed during normal facility hours when approved by the

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

Owner. Asbestos-free related work is work that will not disturb the asbestos material or debris in the Work Area.

3.1.7.4 If Contractor elects to perform removal operations in excess of the aforementioned work hours and days and HACSB approves, Contractor shall pay for monitoring performed by Observation Service and his Consultant, associated with the additional hours, including testing, laboratory analysis and project related expenses.

3.1.7.5 Obtain approval from Owner prior to altering work schedule.

3.1.8 PARKING

3.1.8.1 Park in areas designated by Owner.

3.1.9 BUILDING SECURITY

3.1.9.1 Maintain personnel on the site at all times when any portion of the work area(s), is open or not properly secured including at hazardous waste transport vehicle. Secure work areas completely at the end of each working day.

3.1.10 SEGREGATION OF WORK AREAS

3.1.10.1 Segregate all work areas from the surrounding occupied or unoccupied areas.

3.1.11 PRE-JOB DAMAGE SURVEY OF FACILITY

3.1.11.1 Perform a thorough survey of property and all affected areas of the building with Observation Service and Owner prior to starting the Work in order to document existing damage. Items identified on this list will not be the responsibility of the Contractor unless further damaged by Contractor during execution of Project.

3.1.12 OBSERVATIONS

3.1.12.1 Observation Service will observe the status and progress of the Work for completeness and general compliance with the requirements of the Contract Documents.

3.1.13 SIGN-IN/OUT LOG

3.1.13.1 All Contractor personnel and Project Site visitors shall Sign-In/Out with the Observation Service on a daily basis for the duration of the project.

3.1.14 UTILITIES

3.1.14.1 Contractor may temporarily connect to existing permanent utilities during execution of the Work. All temporary utility connections will be made by fully licensed electrical and plumbing personnel and coordinated with the Owner. Remove connections and all extensions of utilities at Project completion. The cost of water and power consumed will be paid by owner.

3.1.15 SALVAGEABLE MATERIALS

3.1.15.1 Consider all asbestos free materials and contaminated items demolished or removed in the execution of the Work unsalvageable unless specifically noted otherwise in the Specifications or Drawings.

3.1.16 FUTURE WORK

3.1.16.1 Coordinate and schedule the Work of these Contract Documents in a manner that will expedite the transition to future work by others under separate Contracts.

3.1.17 OWNER RULES

3.1.17.1 The Contractor shall abide by the HACSB security rules and regulations.



### 3.2 SUMMARY OF WORK – ASBESTOS ABATEMENT SECTION II

#### 3.2.1 DESCRIPTION

3.2.1.1 **Work included:** Contractor shall furnish all labor, materials, services, permits, insurance (specifically covering the handling and transportation of Asbestos-Containing Material, Asbestos-Containing Construction Material and Asbestos-Containing Waste Material), and equipment which is specified, shown, or reasonably implied for Asbestos Abatement activities specified in Section I.

3.2.1.2 Related Work:

3.2.1.2.1 Section I Asbestos Abatement

3.2.1.3 Applicable Publications: The publications listed below form a part of these Specifications to the extent referenced. The publications are referred to in the text by the basic designation only.

3.2.1.3.1 Code of Federal Regulations (CFR) Publications:

29 CFR 1910.1001	Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite
29 CFR 1926.1101	Asbestos
29 CFR 1910.1200	Hazard Communication
29 CFR 1910.20	Access to Employee Exposure and Medical Records
CFR 1910.132	General Requirements - Personal Protective Equipment
29 CFR 1910.133	Eye and Face Protection
29 CFR 1910.134	Respiratory Protection
29 CFR 1910.145	Specifications for Accident Prevention, Signs & Tags
40 CFR 61, Subpart A	General Conditions
40 CFR 61, Subpart M	National Emission Standards for Asbestos
40 CFR 361.150	Standard for Waste Disposal for Manufacturing, Demolition, Renovation, Spraying and Fabrication Operations
40 CFR Part 763, Appendix A of Subpart E	Asbestos Hazards Emergency Response Act (AHERA)

3.2.1.3.2 American National Standard Institute (ANSI) Publications:

Z9.2-1979	Fundamentals Governing the Design and Operation of Local Exhaust Systems
Z88.2-1992	Practices for Respiratory Protection

3.2.1.3.3 National Fire Protection Association (NFPA):

Standard 90A	Installation of Air Conditioning and Ventilation Systems.
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3.2.1.3.4 U. S. Environmental Protection Agency (EPA):

Publication No. 560/5-85-024	Guidance for Controlling Asbestos-Containing Materials in Buildings, June, 1985
600/4-85-049	Measuring Airborne Asbestos Following an Abatement Action

3.2.1.3.5 American Society for Testing Materials (ASTM) Publications:

E 849-82	Safety and Health Requirements Relating to Occupational Exposures to Asbestos
P-189	Specifications for Encapsulates for Friable Asbestos-Containing Materials

- 3.2.1.3.6 National Institute of Occupational Safety and Health (NIOSH) Publications:  
Manual of Analytical Methods, 2nd Ed., Vol. 1.  
Physical and Chemical Analysis Method (P&CAM):  
Method 239 Asbestos Fibers in Air  
Method 7400 Fibers (N1, 3rd Ed., Vol. 1.)
- 3.2.1.3.7 Underwriters Laboratories, Inc. (UL) Publications:  
586-77 Test Performance of High Efficiency,  
(R1982) Particulate, Air Filter Units
- 3.2.1.3.8 Title 8 California Code of Regulations (CCR):  
Section 1529 Asbestos  
Section 5208 General Industry Safety Orders  
Section 5144 Respirator Regulations
- 3.2.1.3.9 South Coast Air Quality Management District: Amended Rule 1403  
Asbestos Emissions from Renovation/Demolition Activities
- 3.2.1.3.10 Los Angeles Fire Department: Rule 68

### 3.2.2 DEFINITIONS

- 3.2.2.1 **Owner:** Housing Authority of the County of San Bernardino (HACSB)
- 3.2.2.3 **Abatement:** Procedures to control fiber release from Asbestos-Containing building materials. Includes removal, encapsulation, and enclosure.
- 3.2.2.4 **Air Lock:** A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area. (See Decontamination Enclosure System Plan in the Drawing section of this Project Manual)
- 3.2.2.5 **Air Monitoring:** The process of measuring the fiber content of a specific volume of air in a stated period of time.
- 3.2.2.6 **Air Sampling Professional:** The professional contracted or employed to supervise air monitoring and analysis schemes. This individual is also responsible for recognition of technical deficiencies in Worker protection equipment and procedures during both planning and on-site phases of an Abatement Project. Acceptable Air Sampling Professionals include Industrial Hygienists, Environmental Engineers and Environmental Scientists with equivalent experience in Asbestos air monitoring and Worker protection.
- 3.2.2.7 **Amended Water:** Water to which a surfactant has been added.
- 3.2.2.8 **Area Monitoring:** Sampling of airborne fiber concentrations within the Asbestos Work Area and outside the Asbestos Work Area which are representative of the airborne concentrations of Asbestos fibers which may reach the breathing zone.
- 3.2.2.9 **Asbestos:** (29 CFR 1926.1101 Definitions) Includes Chrysotile, Amosite, Crocidolite, Tremolite asbestos, and any of these minerals that has been chemically treated and/or altered.
- 3.2.2.10 **Asbestos** (California Code of Regulations definitions): Means fibrous forms of various hydrated minerals including Chrysotile, (fibrous serpentine), Crocidolite (fibrous Riebeckite), Amosite (fibrous Cumingtonite-Grunerite), Fibrous Tremolite, fibrous Actinolite, and fibrous Anthophyllite.
- 3.2.2.11 **Asbestos-Containing Material (ACM)** EPA definition: Material composed of asbestos of any type in an amount greater than 1 percent and by weight, either alone or mixed with other fibrous or nonfibrous materials.
- 3.2.2.12 **Asbestos-Containing Construction Material** (California definition): Means any manufactured construction material which contains more than 1/10th of 1% asbestos by weight.
- 3.2.2.13 **Asbestos-Containing Waste Material:** Means friable asbestos waste and asbestos waste from control devices (Pollution Control Devices).
- 3.2.2.14 **Asbestos Fibers:** Asbestos fibers having an aspect ratio of at least 3:1 and 5 micrometers in length.
- 3.2.2.15 **Authorized Visitor:** The Owner's Project Team members, the Owner's Representative,

Observation Service and any representative of a regulatory or other agency having jurisdiction over the Project.

- 3.2.2.16 **Clean Room:** An uncontaminated area or room which is a part of the Worker Decontamination Enclosure with provisions for storage of Workers' street clothes and protective equipment.
- 3.2.2.17 **Contained Work Area:** A Work Area which has been Isolated, Plasticized, and equipped with a Decontamination Enclosure System.
- 3.2.2.18 **Curtained Doorway:** A device to allow ingress or egress from one area to another while permitting minimal air movement between the areas, typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, and securing the vertical edge of the outer two sheets along the opposite vertical side of the doorway (see detail on Decontamination Enclosure System Plan in the Drawing section of this Project Manual.)
- 3.2.2.19 **Decontamination Enclosure System:** A series of connected rooms, with Air Locks or Curtained Doorways between any two adjacent rooms, for the decontamination of Workers and of materials and equipment. A Decontamination Enclosure System always contains at least one Air Lock to the Work Area (see standard Decontamination Enclosure System Plan in the Drawing section of this Project Manual.)
- 3.2.2.20 **Encapsulant** (sealant): A liquid material which can be applied to Asbestos-Containing material and which controls the possible release of Asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).
- 3.2.2.21 **Encapsulation:** All herein-specified procedures necessary to apply an encapsulant to Asbestos-Containing building materials to control the possible release of Asbestos fibers into the ambient air.
- 3.2.2.22 **Enclosure:** All herein-specified procedures necessary to enclose completely Asbestos-Containing Material behind airtight, impermeable, permanent barriers.
- 3.2.2.23 **Excursion Limit:** An exposure of airborne concentrations of Asbestos fibers of one fiber per cubic centimeter of air (1f/cc) as averaged over a sampling period of thirty (30) minutes.
- 3.2.2.24 **Equipment Room:** A contaminated area or room which is part of the Worker Decontamination Enclosure with provisions for storage of contaminated clothing and equipment.
- 3.2.2.25 **Equipment Decontamination Enclosure:** That portion of a Decontamination Enclosure System designed for controlled transfer of materials, waste containers and equipment, typically consisting of a Washroom and a Holding Area.
- 3.2.2.26 **Friable Asbestos Material** (40 CFR, Subpart M Definition): Material that contains more than one percent (1%) Asbestos by weight and that can be broken, crumbled, pulverized, or reduced to powder by hand pressure when dry.
- 3.2.2.27 **Fixed Object:** A unit of equipment or furniture or other building component which cannot be detached from the building or can only be detached by destructive methods resulting in irreparable damage to the item.
- 3.2.2.28 **Glovebag Method:** A method with limited applications for removing small amounts of friable Asbestos-Containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other nonplanar surfaces in an Isolated (noncontained) Work Area. The glovebag (typically constructed of six [6] mil transparent Regulite plastic) has two inward-projecting long-sleeve rubber gloves, one inward-projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle for Asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all Asbestos fibers released during the removal process. All Workers who are permitted to use the Glovebag Method must be highly trained, experienced, and skilled in this method.
- 3.2.2.29 **HEPA Filter:** A high efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of all monodispersed particles (Asbestos fibers) equal to or greater than 0.3

microns in mass median aerodynamic equivalent diameter.

- 3.2.2.30 **HEPA Vacuum Equipment:** Vacuuming equipment with a HEPA filter system.
- 3.2.2.31 **Holding Area:** A room in the Equipment Decontamination Enclosure located between the Washroom and an uncontaminated area. The Holding Area comprises an Air Lock.
- 3.2.2.32 **Isolation:** The sealing of all openings into a Work Area.
- 3.2.2.33 **Isolated (noncontained) Work Area:** A Work Area which is Isolated, but has not been Plasticized and may or may not be equipped with a Decontamination Enclosure System.
- 3.2.2.34 **Movable Object:** A unit of equipment, furniture or other building component which is detached or can be detached from the building without destructive methods or results.
- 3.2.2.35 **Negative Air Pressure Equipment:** A portable local exhaust system equipped with HEPA filtration and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.
- 3.2.2.36 **Nonfriable Asbestos-Containing Material:** Material that contains more than one (1) percent Asbestos by weight in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the Asbestos is well bound and will not release fibers during any appropriate end-use, handling, demolition, storage, transportation, processing, or disposal.
- 3.2.2.37 **Observation Service:** The agent of the Owner or the Owner's Representative who shall observe the Work, perform tests, verify that abatement methods and procedures specified by the Contract Documents are being complied with, and reports all observations and test results to the Owner or the Owner's Representative.
- 3.2.2.38 **Permissible Exposure Limit (PEL):** An airborne concentration of asbestos, Tremolite, Anthophyllite, Actinolite, or a combination of these minerals in excess of 0.1 fibers per cubic centimeter of air as an eight (8) hour time-weighted average (TWA), as determined by the method prescribed in Appendix A of Section Five, Part 1925(amended) §1926.1101 (c).CFR.
- 3.2.2.39 **Personal Monitoring:** Sampling of Asbestos fiber concentrations within the breathing zone of an Asbestos Worker.
- 3.2.2.40 **Plasticize:** To cover floors, walls and other structural elements of a Work Area with plastic sheeting as herein specified with all seams securely taped.
- 3.2.2.41 **Removal:** All herein-specified procedures necessary to remove Asbestos-Containing materials from the designated areas and to dispose of these materials at an acceptable site.
- 3.2.2.42 **Shower Room:** A room between the Clean Room and the Equipment Room in the Worker Decontamination Enclosure with hot and cold or warm running water, and suitably arranged for complete showering during decontamination. The Shower Room comprises an Air Lock between contaminated and clean areas.
- 3.2.2.43 **Surfactant:** A chemical wetting agent added to water to reduce surface tension and improve penetration.
- 3.2.2.44 **Washroom:** A room between the Work Area and the Holding Area in the Equipment Decontamination Enclosure System where equipment and waste containers are decontaminated. The Washroom comprises an Air Lock.
- 3.2.2.45 **Wet Cleaning:** The process of eliminating Asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as Asbestos-contaminated waste.
- 3.2.2.46 **Work Area** (Also known as "Regulated Area"): Designated rooms, spaces, or areas of the Project in which Asbestos Abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A Contained Work Area is a Work Area which has been Isolated, Plasticized, and equipped with a Decontamination Enclosure System. An Isolated (noncontained) Work Area is a Work Area which is Isolated, but has not been Plasticized and may or may not be equipped with a Decontamination Enclosure System.
- 3.2.2.47 **Worker Decontamination Enclosure System:** That portion of a Decontamination Enclosure System designed for controlled passage of Workers, and other personnel and Authorized Visitors, typically consisting of a Clean Room, a Shower Room, and an Equipment Room.

3.2.3 QUALITY CONTROL

- 3.2.3.1 **Safety Compliance:** In addition to detailed requirements of this Specification, comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities and publications regarding handling, storing, transporting, and disposing of Asbestos Waste materials. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the Work. Where the requirements of this Specification and referenced documents vary, the most stringent requirements shall apply.
- 3.2.3.2 Contractor shall have at least one copy each of 29 CFR Part 1910 - Occupational Safety and Health Standards, 29 CFR 1926.1101, 40 CFR Part 61, Subparts A & M, and all pertinent state and local regulations at his office and at the job site.
- 3.2.3.3 Before the commencement of any work at the site, the Contractor shall post bilingual (as appropriate) EPA and OSHA caution signs in and around the Work Area to comply with EPA and OSHA regulations.
- 3.2.3.4 Area Monitoring shall be performed by the Observation Service, which will conduct air sampling of the Abatement Project (1) outside the building, (2) immediately outside the Work Area, and (3) for Work Area Clearance Testing after decontamination operations.
- 3.2.3.5 Personal Monitoring and other monitoring, which are required by law, or considered necessary by the Contractor for Worker protection shall be the responsibility of the Contractor.

3.2.4 SUBMITTALS AND NOTIFICATIONS

- 3.2.4.1 **Personnel Training:** At the Pre-construction Meeting, Contractor shall submit (1) declaration certifying that all Contractor's employees have been adequately trained, and (2) a photocopy of training certificates for each employee from their respective training agency or organization. When certified or other formal worker training is required by state or local agencies, Contractor may submit a photocopy of the employee's Asbestos Worker Certification card in lieu of training certificates.
- 3.2.4.2 **Respirators:** Submit at Pre-construction Meeting manufacturer's certification that the respirators to be used in this Project comply with government agency requirements. Contractor's certifications for each employee must clearly state that each employee has been fit tested and properly trained for respirators.
- 3.2.4.3 **Medical Examinations:** Submit proof that all persons providing labor and/or professional services who will be entering contaminated areas have had current (less than one year prior to the date of their participation on the Project) medical examinations. Furnish physician's interpretation of said examinations to the Owner on the Certificate of Medical Compliance form provided in the Supplementary General Conditions section of these Construction Documents at the Pre-construction Meeting, or prior to that person's commencing work on this Project, and for each person subsequently providing labor and/or professional services at the job site for whom a certificate was not initially furnished. Refer to Article 2.5, A. **NOTE:** In lieu of the above certificate, current medicals will be acceptable providing that a statement in the medical exam declares that the worker can wear a negative pressure respirator while performing their work. Contractor shall resubmit physician's interpretation of medical examination for each worker or professional employed by him whose physician or regulatory required annual or employment termination examination becomes due while said worker or professional is participating in the Project. This requirement can be waived or modified only by the Owner in writing or verbally, followed up in writing.
- 3.2.4.4 **Product Submittals and Substitutions:** Comply with pertinent provisions of Section 01340.
- 3.2.4.5 **Abatement Product Data:** Within ten (10) days after Contractor has received the Owner's Notice of Award, submit manufacturer's catalogue, samples, Material Data Safety Sheets, (MSDS) and other items needed to demonstrate fully the quality of the proposed abatement materials. Under no circumstances shall proposed materials be used before written approval from the Owner, Owner's Representative or Observation Service.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

Submittals are required if the following materials are proposed (not necessarily a complete list.) Do not submit data on products not proposed for this project:

- 3.2.4.5.1 Encapsulate
  - 3.2.4.5.2 Surfactant
  - 3.2.4.5.3 Protective packaging
  - 3.2.4.5.4 Lagging adhesive
  - 3.2.4.5.5 Glove bags
  - 3.2.4.5.6 Restaurant
  - 3.2.4.5.7 Solvents
- 3.2.4.6 **Permits:** Submit at Pre-construction Meeting proof satisfactory to the Owner, Owner's Representative or Observation Service that all required permits have been obtained. If no permits are required, submit notarized letter stating such.
- 3.2.4.7 **Waste Transportation:** Submit at Pre-construction Meeting the method of transport of Hazardous Waste, including the name, address, EPA ID number, and telephone number of the Transporter(s).
- 3.2.4.8 **Hazardous Waste Disposal Facility:** Submit for approval at the Pre-construction Meeting the name, address, EPA ID number, and telephone number of the Hazardous Waste Disposal Facility(s) to be used.
- 3.2.4.9 **Contractor's Work Plan:** Submit at the Pre-construction Meeting for approval a detailed plan of the work procedures to be used in the removal, repair, clean-up or encapsulation of materials containing Asbestos. Such a plan shall include:
- 3.2.4.9.1 Location of Asbestos Work Areas.
  - 3.2.4.9.2 Layout and construction details of Decontamination Enclosure Systems.
  - 3.2.4.9.3 Project schedule including important milestones, critical paths and interface of trades involved in the Work.
  - 3.2.4.9.4 Personal air monitoring procedures.
  - 3.2.4.9.5 Detailed description of the method to be employed in order to control pollution, including negative air equipment calculations.
  - 3.2.4.9.6 Names of Superintendent, Foremen, Project Manager and other key personnel, and their day-time and emergency telephone numbers.
  - 3.2.4.9.7 Security Plan including sketches necessary to clearly describe the plan.
  - 3.2.4.9.8 Emergency evacuation plan for injured workers, compressor failure, fire and other emergencies.
  - 3.2.4.9.9 Firewatch Plan including any sketches necessary to clearly describe the plan.
  - 3.2.4.9.10 A contingency plan, in the event of a major contamination incident caused by fire (on or off the floor being abated), a large breach in the Work area containment barrier, the opening of stairwell doors, breakage of the building's exterior windows or sabotage. Such a plan will focus on how to maintain safety and order when the building is fully occupied by office employees and other building users.
  - 3.2.4.9.11 The Asbestos Plan must be approved in writing by the Owner and Observation Service before the start of any work.
- 3.2.4.10 **Equipment Certification:** Submit at Pre-construction Meeting manufacturers' certification that vacuums, negative air pressure equipment filters, and other local exhaust ventilation equipment conform to ANSI Z9.2-1979. All negative air pressure equipment Permit to Operate issued by the South Coast Air Quality Management District.
- 3.2.4.11 **Rental Equipment:** When rental equipment is to be used in removal areas or to transport waste materials, a copy of the written notification provided to the rental company informing them of the nature of use of the rented equipment shall be signed by the rental company and submitted to the Observation Service at the Pre-construction Meeting.

3.2.4.12 **Notifications:** Contact the following government agencies in writing by certified/registered mail or overnight mail service, postmarked or delivered at least ten (10) working days prior to Project commencement:

- 3.2.4.12.1 EPA Regional Asbestos Coordinator
- 3.2.4.12.2 Occupational Safety and Health Administration
- 3.2.4.12.3 South Coast Air Quality Management District
- 3.2.4.12.4 Check with local Fire Authority for their Notification Requirements

ALL NOTIFICATIONS SHALL CONTAIN AS A MINIMUM THE FOLLOWING INFORMATION:

1. Name, address and telephone number of the Owner including the contact person.
2. Name, address, EPA numbers, license number and telephone number of the Contractor including the contact person.
3. Name, address and description of the building, including size, age, and prior use of building.
4. The type and quantity of friable Asbestos material involved and the description of the Work.
5. Scheduled starting and completion dates for Abatement Work.
6. Procedures that shall be employed to comply with the regulations.
7. The name, address, EPA number and telephone number of the Transporter.
8. The name and address of the Hazardous Waste Disposal Facility where the Asbestos Waste shall be deposited.

Copies of all government agency correspondence and proof of delivery shall be delivered to the Observation Service at the Pre-construction Meeting.

NOTE: No work shall commence until verification of required notifications is made by the Observation Service.

3.2.4.13 **Certificate of Worker's Release:** The Contractor shall have any person providing labor and professional services at the Project site sign a Certificate of Worker's Release, on the form provided in the Supplementary General Conditions section of these Construction Documents, before commencing work on this Project. Contractor shall furnish the notarized original of such Certificate of Worker's Release for each such person at the Pre-construction Meeting or before that person's commencement of Work, and for each person subsequently providing labor or professional services at the job site for whom a Certificate was not initially furnished. This requirement can be waived or modified only by the Owner, in writing or verbally, followed in writing.

3.2.4.14 Provide proof of Contractor's License and Asbestos Certification from the Contractor Licensing Board, and proof of registration with the Division of Occupational Safety and Health in accordance with California Labor Code, Section 6501. Submit proof with Bid.

3.2.4.15 Encapsulant manufacturer's certification (when required) that the Contractor is an approved applicator of the encapsulants to be used on this project

3.2.4.16 **Scaffolding:** Submit to the Owner's Representative or Observation Service prior to abatement work, certification from a licensed Civil or Structural Engineer that the scaffolding design and installation is safe and adequate for the purpose for which it will be used. Submit copy of scaffolding permit when required by local regulatory agencies.

### 3.2.5 ADMINISTRATION OF THE CONTRACT

3.2.5.1 All Work is to be performed under the observation of the Observation Service and the Owner's Representative, who shall be free to enter and review all Work.

**3.2.6 SAFETY**

3.2.6.1 Submit at the Pre-construction Meeting written procedures for evacuation of injured Workers. Aid for seriously injured Workers shall not be delayed in order to comply with standard decontamination procedures. It is the responsibility of the Contractor to decide if the seriousness of the injury warrants noncompliance with the standard decontamination procedures.

**3.3 WORKER PROTECTION**

**3.3.1 TRAINING PROGRAM**

3.3.1.1 Each employee shall receive training in the proper handling of materials that contain Asbestos, including all aspects of work procedures and protective measures, use of protective clothing and respiratory protection, use of showers, entry and exit procedures from Work Areas and in OSHA regulations. All workers who are scheduled to use the Glovebag Method must be highly trained, experienced and skilled in this method. Each employee shall also understand the health implications and risks involved, including the illness possible from exposure to airborne Asbestos fibers and the increased risk of lung cancer associated with smoking cigarettes and Asbestos exposure, understand the use and limits of the respiratory equipment to be used, and understand the purpose of medical surveillance and the monitoring of airborne quantities of Asbestos as related to health and respiratory equipment. The training program shall comply with federal, state or local regulatory requirements.

3.3.1.2 Emergency evacuation procedures to be followed in the event of Worker injury.

**3.3.2 DRESS AND EQUIPMENT**

3.3.2.1 Work clothes shall consist of disposable full-body coveralls, head covers, boots, and rubber gloves. Sleeves at wrists and cuffs at ankles shall be secured. Fire retardant full-body coveralls are required in areas of open flame, or where required by local regulations.

3.3.2.2 Eye protection and hard hats shall be required at all times by applicable safety regulations.

3.3.2.3 Provide Authorized Visitors with suitable protective clothing, headgear, eye protection, and footwear whenever they are required to enter the Work Area.

**3.3.3 RESPIRATORS**

3.3.3.1 Respiratory protective equipment shall be MSHA/NIOSH approved in accordance with the provisions of 30 CFR Part 11 unless superseded by local regulations with more stringent requirements. Respiratory instructions shall be posted in the Clean Room.

3.3.3.2 Half-mask or full-face air-purifying respirators with HEPA filters may be worn during the preparation of the Work Area, performance of repair work, use of glovebag techniques, removal of floor tile and mastic, and decontamination work, provided Work Area fiber concentrations are less than 0.1 f/cc.

3.3.3.3 Workers shall always wear a respirator, properly fitted on the face, in the Work Area, from the initiation of abatement work until all areas have been given written clearance by the Observation Service.

**3.3.4 WORKER PROTECTION PROCEDURES – TO BE POSTED IN CLEAN ROOM**

Bilingual (English and other appropriate language[s]) Worker Protection Procedures must be posted in the Clean Room. If the first language of all Workers is English, the bilingual procedures are excepted.

3.3.4.1 Each Worker and Authorized Visitor shall, upon entering the job site: remove street clothes in the Clean Room and put on a respirator and clean protective clothing before entering the Equipment Room or the Work Area.

3.3.4.2 All Workers shall, each time they leave the Work Area: remove gross contamination from clothing before leaving the Work Area; proceed to the Equipment Room and remove all



clothing except respirators; When Friable ACM has been abated, still wearing the respirator, proceed naked to the showers; clean the outside of the respirator with soap and water while showering; remove the respirator; thoroughly shampoo and wash themselves.

- 3.3.4.3 Following showering and drying off, each Worker shall proceed directly to the Clean Room and dress in their personal clothing. Before reentering the Work Area, each Worker and Authorized Visitor shall put on a clean respirator and shall dress in clean protective clothing.
- 3.3.4.4 Contaminated protective clothing and work footwear shall be stored in the Equipment Room when not in use in the Work Area. At appropriate times or upon completion of Asbestos Abatement, dispose of protective clothing and footwear as contaminated waste, or launder in accordance with government regulations.
- 3.3.4.5 Workers removing waste containers from the Equipment Decontamination Enclosure shall enter the Holding Area from outside wearing a respirator and dressed in clean disposable coveralls. No Worker shall use this system as a means to leave or enter the Washroom or the Work Area.
- 3.3.4.6 The disposable clothing worn outside the Work Area shall be of different color or markings from the disposable clothing worn inside the Work Area.
- 3.3.4.7 Workers shall not eat, drink, smoke, or chew gum or tobacco while in the Work Area.
- 3.3.4.8 Workers and Authorized Visitors with beards or who are unshaven shall not enter the Work Area.

### 3.3.5 MEDICAL EXAMINATIONS AND HISTORIES

- 3.3.5.1 Before exposure to airborne Asbestos, the Contractor will provide each employee providing labor or professional services at the Project site with a current comprehensive medical exam, including a history of respiratory and gastrointestinal diseases, meeting the general definition outlined in 29 CFR 1910.1001, 29 CFR 1910.134, 29 CFR 1926.1101 and California Administrative Code Title 8, CAC Section 5208, page 442.2.1 part (1). Contractor shall submit the signed original "Certificate of Medical Compliance" form provided in these Contract documents as proof of compliance with regulatory medical requirements. In lieu of the above form, a current Medical Examination report will be accepted. The medical report shall contain a statement from the examining physician that the employee can (or cannot) function normally wearing a respirator or that the safety or health of the employee or other employees will or will not be impaired by his use of a respirator. Submission of medicals or completed Certificates of Medical Compliance is not required when local jurisdictions (New York City, Massachusetts, etc.) require proof of current medical examination before issuance or renewal of Asbestos Worker Certificates. No employee will be allowed to enter the Work Area without having first provided the completed Certificate of Medical Compliance form, or a copy of their Medical Examination, to the Owner's Representative and until the submitted form or medical has been approved by the Observation Service. Local medical requirements shall apply if they are more stringent.

### 3.3.6 EMPLOYEE IDENTIFICATION

- 3.3.6.1 The Contractor shall furnish an employee roster to the Owner's Representative for each work shift. Each employee entering the Work Area shall have in his possession a plastic-coated identification tag with the employee's photograph, name, age, height, weight, and eye color. Each employee shall bring to the job at least two forms of identification, one of which has his/her photograph.

## 3.4 **PRODUCTS**

### 3.4.1 GENERAL

- 3.4.1.1 Contractor shall furnish, provide and utilize the following products in the Work as specified.

3.4.2 PROTECTIVE COVERING (PLASTIC)

3.4.2.1 Ten (10) mil, six (6) mil, and four (4) mil polyethylene sheets in sizes to minimize the frequency of joints.

3.4.3 TAPE

3.4.3.1 Duct Tape 2" or wider, or equal, and capable of sealing joints of adjacent sheets of plastic, and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials, and capable of adhering under both dry and wet conditions, including use of amended water.

3.4.4 PROTECTIVE PACKAGING

3.4.4.1 Appropriately labeled clear, double six (6) mil sealable polyethylene bags as a minimum.

3.4.4.2 Appropriately labeled, sealable, impermeable drum containers.

3.4.4.3 Bilingual labels (English and other appropriate language[s]) on containment glovebags, waste packages, contaminated material packages and other containers shall be in accordance with EPA or OSHA standards.

3.4.5 WARNING LABELS AND SIGNS

3.4.5.1 As required by 29 CFR 1910.1001, 29 CFR 1910.1200, 29 CFR 1926.1101 and other pertinent state and local regulations, whichever is the most stringent.

3.4.6 SURFACTANT

3.4.6.1 Surfactant, or wetting agent, for amending water will be 50 percent polyoxyethylene polyglycol ester and 50 percent polyoxyethylene ether, or equivalent, at a concentration of one (1) ounce per five (5) gallons of water.

3.4.7 ENCAPSULATING SEALER

3.4.7.1 Shall be a penetrating or bridging type, pollution-free, nontoxic, with a Class A fire classification as specified herein. Encapsulants with the ingredient Methylene Chloride are not acceptable unless the contractor can prove to the Owner's satisfaction that equal substitute materials are not available. If substitutes are not used, the Contractor shall submit with the Asbestos Plan, for Owner approval, respiratory protection and negative air discharge procedures to protect workers, authorized personnel and the public from Methylene Chloride exposure. Material shall be flexible when cured, resistant to weathering, oxidation, aging and abuse. The following encapsulating materials are approved by LAISD: Asbestos protective Coatings Corp. ABS-100, Certified Technologies Corp. Certain 2000, International Protective Coatings Corp. Serpiflex. No substitutions will be considered.

3.4.7.2 Shall be a water-dispensed coating, insoluble in water when cured.

3.4.7.3 Shall be used undiluted.

3.4.7.4 Shall have a written certification from the manufacturer that the encapsulant is compatible with the replacement material and will safely withstand temperatures of all surfaces on which the encapsulation will be applied.

3.4.7.5 The Owner's Representative may at any time take random samples of encapsulant from open containers or spray equipment for testing to insure product quality and compliance with the Specifications.

3.4.7.6 Encapsulant found not to be in conformance with requirements of these Specifications shall be removed from the site immediately. All areas where the defective encapsulant has been applied shall be re-sprayed with approved encapsulant or remedied in a manner, including the possibility of removal and replacement of the subject Asbestos-Containing Material, acceptable to the Owner. Re-encapsulation expense shall be borne by the Contractor.

3.4.7.7 Encapsulate to be applied to structural members before reapplication of spray-applied or trowel-applied fireproofing must be a component of the fireproofing system when it was

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

tested and rated by the underwriters' laboratory (UL), American Society for Testing Materials (ASTM), Factory Mutual (FM) or other building code approved testing agencies.

- 3.4.8 LAGGING ADHESIVE
  - 3.4.8.1 Shall meet NFPA 90A Code, such as Arabol, Childers CP52, Insul-Coustic 102, or approved equal.
  
- 3.4.9 GLOVEBAGS
  - 3.4.9.1 The glovebag (typically constructed of six [6] mil transparent regulated plastic) has two (2) inward-projecting longsleeve rubber gloves, one (1) inward-projecting waterwand sleeve, an internal tool pouch, and an attached labeled receptacle for Asbestos Waste.
  
- 3.4.10 TOOLS AND EQUIPMENT
  - 3.4.10.1 Provide suitable tools for Asbestos removal and encapsulation.
  - 3.4.10.2 Negative air pressure equipment: High-efficiency particulate air (HEPA) filtration systems shall have filtration equipment in compliance with ANSI Z9.2-1979, local exhaust ventilation. No air movement system or air filtering equipment shall discharge unfiltered air outside the Work Area.
  - 3.4.10.3 Manometer:
    - 3.4.10.3.1 Shall have a built-in alarm. Continuous hard copy readout optional.
  - 3.4.10.4 HEPA Vacuums:
    - 3.4.10.4.1 Shall comply with ANSI Z9.2-1979.
  
- 3.4.11 RESTAURANT (Standard Roofing Product):
  - 3.4.11.1 Asphalt cut back with solvent, fillers and plasticizers added, low melt type, shall make up 65-76% of the restaurant. Thinner shall be a blend of mineral spirits and naphtha making up 30-35% of the restaurant covers. The fillers shall consist of plasticizing oils, wetting agents to aid in penetration, thickeners to add body and control flow (Bentonite clay).
  
- 3.4.12 LUMBER
  - 3.4.12.1 Shall be flame retardant and carrying markings certifying such properties.
  
- 3.4.13 SOLVENTS
  - 3.4.13.1 No petroleum or citrus based materials shall be applied to floors for any purpose. Other solvents if approved by Owner shall be non-toxic, non-carcinogenic, nonflammable (flash- point in excess of 200° F.), nonreactive with or damaging to materials it will come in contact with and approved for indoor use by regulatory agencies. Provide ventilation of Work Area as required by manufacturer. Vent exhaust to the exterior of the building and in a manner that will not result in adverse effects to other areas of the facility, adjacent facilities or public areas. Solvents shall not be used in areas where foods are stored.

### 3.5 EXECUTION

- 3.5.1 WORK AREA PREPARATION
  - 3.5.1.1 Preparation Procedures for: The removal of resilient floor tile, resilient sheet flooring, flooring mastic:**
    - 3.5.1.1.1 The above removal shall be executed in an Isolated Work Area.
    - 3.5.1.1.2 Contractor shall isolate the Work Area for the duration of the Project, completely sealing all openings, including but not limited to, HVAC ducts, diffusers and grilles, skylights, doorways and windows, with six (6) mil polyethylene sheet plastic securely taped to a clean surface. Cover all wall surfaces up to six (6) feet from floor level with

## Waterman Gardens - Abatement &amp; Demolition Services

a minimum of one (1) layer of 6-mil polyethylene sheeting if NO Mechanical equipment will be used to remove the ACM Floor tile and ACM Mastic. If using Mechanical means for removal, than full containment (walls and ceilings) shall be implemented.

- 3.5.1.1.3 Curtained Doorway: Contractor shall construct a Curtained Doorway of clear plastic sheeting, using six (6) mil polyethylene plastic, at entrances and exits to the Work Area.
- 3.5.1.1.4 The Contractor shall check regularly (at the beginning, middle and end of each shift as a minimum) all polyethylene isolation barriers for punctures, loose seals, and contact with heat-generating devices, etc. Problem areas shall be repaired or mended immediately.
- 3.5.1.1.5 The Contractor shall install and maintain Negative Air Pressure Equipment during the abatement and decontamination phases of the Project until the Clearance Test has passed. In unoccupied facilities a sufficient amount of air shall be exhausted by the unit(s) to create a pressure of -0.02 inches of water within the Work Area with respect to the area outside the Work Area. If only one unit is necessary to provide the specified negative air pressure in a Work Area, the Contractor shall have a backup unit in place should the first unit fail and for filter changes. When the "Mini Containment" option is utilized the Contractor may substitute a HEPA vacuum to create the specified negative air pressure within the Work Area when standard Negative Air Pressure Equipment volumes are too great.
- 3.5.1.1.6 Maintain existing emergency exits from the building. Maintain a minimum of two (2) exits from the Work Area where possible. The first exit shall be the Worker Decontamination Enclosure system. The second exit, when possible, shall be a second door, window, or other appropriate opening with a rip cord emergency only exit seal. Exits, where possible, shall be on opposite ends of the Work Area. All exits shall be labeled in bright letters or signage. The second exit shall be labeled "Emergency Exit Only." Establish alternative exits satisfactory to fire officials when existing building Work Area emergency exits are unavoidably blocked by activities of this project.
- 3.5.1.1.7 Provide and maintain appropriate "ABC" type fire extinguishers in the Work Area. The size and number of extinguishers shall be as required by local fire officials, but shall not be less than one (1) fire extinguisher inside and outside the Work Area.
- 3.5.1.1.8 Provide temporary emergency lighting with battery backup power in all Work Areas where none exists. Work Areas with natural lighting, and no night work to be performed, are exempt from this requirement. [Temporary emergency lighting in the following Work Area(s) is optional if the Contractor provides flashlights to workers. NOTE: Flashlights must be in the possession of the Worker at all times while in Work Areas.
- 3.5.1.1.9 Notify the Observation Service twenty-four (24) hours in advance of when preparatory steps will be completed. Asbestos Abatement Work shall not commence until: all preparation requirements have been completed; all tools, equipment, and materials are on hand; all required submittals, notices and permits have been approved, and until the Observation Service authorizes in writing that Work is to commence.

**3.5.1.2 Preparation procedures for removal of non-friable Asbestos-Containing roofing mastics:**

- 3.5.1.2.1 Remove all non-stationary objects from the work area and store in an area that is not subject to contamination by subsequent roofing removal.

## Waterman Gardens - Abatement &amp; Demolition Services

- 3.5.1.2.2 Cover all stationary objects and surfaces not intended for removal or stripping of asbestos containing materials. Cover and render air tight with a minimum 6-mil polyethylene sheeting all air passage ways such as doors, windows and vents that are immediately adjacent or contiguous to the work area surface. This does not include the openings at the sides and ends of the building.
- 3.5.1.2.3 It is the responsibility of the Abatement Contractor to ensure that all windows and doors are closed and locked during the removal procedures. Use an airless sprayer to wet materials prior, during and after removal procedures.

## 3.5.2 DECONTAMINATION ENCLOSURE SYSTEMS

## 3.5.2.1 Decontamination Enclosure Systems (Worker and Equipment) general requirements:

- 3.5.2.1.1 Build suitable wood, metal or PVC framing as described herein and as approved by the Observation Service at the shop drawing submittal stage. Framed walls susceptible to damage or which also form a security barrier between Work Areas and public areas shall be sheathed with 3/8" min. plywood. Paint public facing side of plywood (color to be selected by Owner). Portable prefab units, if utilized, must be submitted for review and approval by the Observation Service before start of construction. Submittal shall include, but not be limited to, a floor plan layout complying with the schematic layouts bound herein, showing dimensions, materials, sizes, thickness, plumbing, and electrical outlets, etc.

## 3.5.2.2 Decontamination Enclosure System for asbestos abatement work in "Contained" Work Areas:

- 3.5.2.2.1 Construct a Workers' Decontamination Enclosure System contiguous to the Work Area consisting of three totally enclosed chambers to conform with standard drawings bound herein as follows:
  - 3.5.2.2.1.1 An Equipment Room with an Air Lock to the Work Area and a Curtained Doorway to the Shower Room.
  - 3.5.2.2.1.2 A Shower Room with two Curtained Doorways, one to the Equipment Room and one to the Clean Room. Plastic on Shower Room and adjoining Equipment and Clean Rooms shall be opaque. The Shower Room shall contain at least one shower with hot and cold or warm water. Careful attention shall be paid to the shower enclosure to ensure against leaking of any kind. Trap shower waste using filters having a maximum pore size of 1.0 micron, and drain into a sanitary sewer. Replace filters when they become clogged. Ensure a supply of soap and disposable towels at all times in the Shower Room.
  - 3.5.2.2.1.3 A Clean Room with one Curtained Doorway into the shower and one entrance or exit to noncontaminated areas of the building. The Clean Room shall have sufficient space for storage of the Workers' street clothes, towels, and other noncontaminated items. Joint use of this space for other functions, such as offices, storage of equipment, materials, or tools, shall be prohibited.
- 3.5.2.2.2 Construct an Equipment Decontamination Enclosure System consisting of two totally enclosed chambers as follows:
  - 3.5.2.2.2.1 A Washroom with an Air Lock to a designated staging area of the Work Area and a Curtained Doorway to the Holding Room.
  - 3.5.2.2.2.2 A Holding Room with a Curtained Doorway to the Washroom and a doorway to an uncontaminated area.
- 3.5.2.2.3 Decontamination Enclosure System for non-friable Roof Asbestos-Containing materials:

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

3.5.2.2.3.1 None required. However, workers shall HEPA vacuum work clothes and wet wipe respirator with amended water.

3.5.3 ASBESTOS REMOVAL

- 3.5.3.1 Before removal, Asbestos materials shall be sprayed with Amended Water. The Asbestos materials shall be sufficiently saturated without causing excessive dripping and to prevent emission of airborne fibers, at any time, in excess of Maximum Acceptable Level. Spray materials repeatedly during the work process to maintain a wet condition. If the materials are not easily saturated, then the Work Area shall be constantly misted to keep fiber emission minimal.
- 3.5.3.2 Asbestos material shall be removed in manageable sections by a multi-person team, some of whom are wetting and the remainder removing and cleaning. Material shall not be allowed to dry out. Before a second area can be started, removed material shall be packed into approved and labeled packaging while it is still wet and removed from the work area. All work areas will be left in a clean condition at the end of each work shift. The outside of all containers shall be clean before leaving the Work Area. Move containers to the Washroom (Shower Room when Equipment Decontamination System is not required), wet- clean each container thoroughly, and move to Holding Area pending removal to uncontaminated areas.
- 3.5.3.3 Asbestos material applied to concrete, steel decks, beams, columns, pipes, tanks, and other nonporous surfaces shall be wet-cleaned to a degree that no traces of debris or residue are visible.
- 3.5.3.4 Asbestos material debris, drippings, splatters, and overspray on surfaces within accessible cavities and other accessible areas shall be removed in the same manner and cleaned to the degree as specified above.
- 3.5.3.5 The Work Area shall be kept orderly, clean and clear of work materials, polyethylene sheeting, tape, cleaning material, and clothing, and all other disposable material or items used in the Work Area shall be packed into properly labeled protective packaging and removed from the Work Area.
- 3.5.3.6 Protective packages and drums containing Asbestos materials shall be cleaned and stored in the isolated Holding Area until that time when the materials are to be loaded and hauled to the Hazardous Waste Disposal Facility for burial. The packages and drums shall be stored in piles no higher than four (4) feet, and in a manner that will not result in damage to the packages or drums. Transport bags in covered drums or carts from the Holding Area to the transport.
- 3.5.3.7 Equipment removal procedures: Clean surfaces of contaminated equipment thoroughly by wet-sponging or wiping before moving such items into the Washroom (Shower Room when Equipment Decontamination System is not required) for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave Work Area through the Equipment Decontamination Enclosure.
- 3.5.3.8 Do not bag water used during abatement activities. Properly filter and drain water into building sanitary drain unless prohibited by local regulations. Filter shall have a maximum pore size of 1.0 micron.
- 3.5.3.9 Nonfriable materials:
  - 3.5.3.9.1 Floor Tile and Friable Mastic: Remove floor tile and mastic with wet methods and in a manner that will not create friable debris. Mechanical equipment or tools used with water/chemicals are permissible providing that friable debris will not be generated. Mechanical equipment or tools used without the use of water will be allowed only if they are the dustless type and if the equipment has a self-contained bagging system and HEPA filtration or under a "full containment." Remove tile mastic until no residue is visible other than that which is embedded in the pores, cracks, or other voids below the surface of the floor substrate. Package floor tile and mastic in unlabeled double six (6) mil lined containers or bags, or in accordance with the disposal facilities

requirements.

3.5.3.9.2 Roofing Mastic Materials (Flashing and Penetration mastics):

- 3.5.3.9.2.1 Use removal methods that will keep the tearing and fraying of the roof membrane to a minimum. If sawing tools are used, they must be factory equipped with HEPA filtering devices, or perform in a manner that will not release visible dust emissions. Roofing debris made friable shall be misted with an asphalt emulsion before transportation to dumpsters. Do not use water. Do not use excessive amounts of emulsion that may result in leakage into the building.
- 3.5.3.9.2.2 Off-load roofing debris into dumpster by means of chutes, cranes or hand to hand. Use dust control methods as required to hold dust generation to a minimum.
- 3.5.3.9.2.3 The work area shall be kept orderly, clean and clear of work materials. Package roofing mastic materials in unlabeled double six (6) mil lined containers (bins) or bags.

3.5.4 DECONTAMINATION OF WORK AREA

3.5.4.1 Decontaminated procedures for "Contained" Work Areas, excluding Asbestos-Containing Material encapsulation work:

- 3.5.4.1.1 Remove all visible accumulations of Asbestos material and debris. Wet-clean all surfaces within the Work Area to remove Asbestos residue.
- 3.5.4.1.2 After cleaning, the Contractor shall perform a complete visual inspection of the Work Area to ensure that the Work Area is free of any visible debris or residue.
- 3.5.4.1.3 Upon completion of his visual inspection, the Contractor shall notify the Observation Service in advance that the Work Area is ready for Initial Review.
- 3.5.4.1.4 Upon proper notification, the Observation Service will review the Work Area for general conformance with the Specifications. Any nonconformance of the Work shall be remedied by the Contractor until the Work Area is in compliance, and at the Contractor's expense.
- 3.5.4.1.5 Upon successful compliance with the Initial Review by the Observation Service and after written notification, the Contractor shall encapsulate surfaces where Asbestos materials have been removed. Unless specified otherwise encapsulate those portions of the items where the Asbestos-Containing material was missing prior to the start of this Contract.
- 3.5.4.1.6 Upon proper notification, the Observation Service will review the encapsulated surfaces for general conformance with the Specifications. Any nonconformance of the Work shall be remedied by the Contractor until the Work is in compliance and at the Contractor's expense.
- 3.5.4.1.7 Sealed drums and bags, and all equipment used in the Work Area, shall be included in the cleanup and shall be removed from the Work Area via the Equipment Decontamination Enclosure System, at the appropriate time in the cleaning sequence.
- 3.5.4.1.8 Contractor shall notify the Observation Service twenty-four (24) hours in advance that the Work Area is ready for Pretesting Review and Clearance Testing. Refer to appropriate Article on Air Monitoring in this Section for Clearance Testing standards. Contamination found during the Pre-testing Review shall be remedied by the Contractor, at his expense, prior to clearance testing.
- 3.5.4.1.9 Upon written notification from the Observation Service that the Work Area has passed the standard for Clearance Testing, the Contractor shall apply, when included in the Contract, the Asbestos-free replacement materials and re-establish objects and systems as specified in these specifications. The inner plastic layer and isolation barriers may be removed by the Contractor at any time after written notification.
- 3.5.4.1.10 Upon completion of the application of replacement materials, or if no replacement

## Waterman Gardens - Abatement &amp; Demolition Services

materials are required, after the removal of the inner plastic layer, isolation barriers and the re-establishment of objects and systems the Contractor shall notify the Observation Service and/or Owner's Representative twenty-four (24) hours in advance that the Work Area is ready for Pre-final Review.

- 3.5.4.1.11 Upon notification, the Observation Service and Owner's Representative will review the Work Area. Improper application of replacement materials, unapproved damage to the facility or its contents, or improper re-establishment of objects and systems discovered during the Pre-final Review shall be itemized on a Punch List for correction by the Contractor at his expense. If no deficiencies are discovered the Contract or this portion of the Contract shall be approved in writing by the Observation Service and Owner's Representative as complete. If deficiencies are noted, continue with the subsequent procedures. NOTE: If deficiencies noted do not prevent the Owner from occupancy or proceeding with reconstruction work shall be specified in writing by the Observation Service and the Owner's Representative Substantially Complete.
- 3.5.4.1.12 Upon correction of Punch List deficiencies the Contractor shall notify the Observation Service and Owner's Representative in advance that the Work Area is ready for Final Review.
- 3.5.4.1.13 Upon notification the Observation Service and Owner's Representative will review the corrected Punch List deficiencies. If all deficiencies have been corrected, the Contract, or this portion of the Contract, shall be approved in writing by the Observation Service and Owner's Representative as complete. If deficiencies have not been properly corrected the Contractor shall repeat, at his expense, procedures 15 and 16 until all deficiencies have been corrected and approved. NOTE: If deficiencies noted do not prevent the Owner from occupancy or proceeding with reconstruction work, the Contract or this portion of the Contract shall be specified in writing by the Observation Service and the Owner's Representative Substantially Complete.

### 3.5.5 ASBESTOS DISPOSAL

- 3.5.5.1 Asbestos-Containing Waste Materials shall be packed into approved sealed and labeled protective packaging.
- 3.5.5.2 Containers removed from the Holding Area must be removed by Workers who have entered from uncontaminated areas dressed in clean coveralls. Workers must not enter from uncontaminated areas into the Washroom or the Work Area; contaminated Workers must not exit the Work Area through the Equipment Decontamination Enclosure System.
- 3.5.5.3 Contractor shall deliver Asbestos-Containing Waste Materials to the predesignated Hazardous Waste Disposal Facility in accordance with the guidelines of the EPA.
- 3.5.5.4 The Contractor shall notify the Observation Service twenty-four (24) hours, in advance, when Asbestos-Containing Waste Materials are to be removed from the site. The Observation Service must be present during the removal of Asbestos-Containing Waste Materials from the Work Area. A copy of the Uniform Hazardous Waste Manifest, or other document required by State or Local agencies, shall be submitted to the Observation Service for review and signature prior to transporting Asbestos-Containing Waste Materials to the disposal facility.



- 3.5.5.5 At the conclusion of Work, the Contractor shall provide evidence (such as a "Bill of Lading" or "Hazardous Waste Manifest") that the Asbestos-Containing Waste Material was disposed of at the approved EPA Hazardous Waste Disposal Facility. The evidence shall be submitted with the final request for payment, the Contractor shall indicate on the "Bill of Lading" or "Hazardous Waste Manifest" the weight, in tons, of the Asbestos-Containing Waste Material generated from the Project. This weight amount must be confirmed by a party independent from the Contractor.
- 3.5.5.6 The Contractor shall be responsible for the safe handling and transportation of all Hazardous Waste, generated by the Project of this Contract, to the designated Hazardous Waste Disposal Facility. The Contractor shall bear all costs for all claims, damages, losses, and clean up expenses against the Owner or the Observation Service, including but not limited to attorney's fees rising out of, or resulting from, Asbestos spills on the site or spills en-route to the Hazardous Waste Disposal Facility.
- 3.5.5.7 Nonfriable Debris Disposal: Resilient floor tiles, and other Nonfriable Asbestos-Containing Materials will not be required to be disposed of as hazardous waste, unless they are made friable during demolition (see definitions for description of friability). Friability will be determined by the Observation Service, Owner's Representative or a representative of a regulatory agency. Originally, nonfriable materials determined friable by a representative of a regulatory agency, the Observation Service or Owner's Representative, will be considered a "Change in the Work," providing the Contractor cannot control the friability of the materials when following the removal procedures specified earlier in this Section. Additional handling and disposal costs, due to a "Change in the Work," will be adjusted in accordance with the Contract Documents.**

3.5.6 AIR MONITORING AND TESTING

3.5.6.1 Area Air Monitoring:

- 3.5.6.1.1 Throughout removal, encapsulation, and cleaning operations, Area Air Monitoring shall be conducted by the Observation Service to ensure that the Contractor's engineering controls and work practices are minimizing worker and public exposures to airborne asbestos fibers. In accordance with applicable codes, regulations, and ordinances. Fiber counting shall be done by the PCM Method No. 7400 established by NIOSH, with the following as minimum samplings recommended by the EPA:

<u>Areas To Be Sampled</u>	<u>Minimum No of Samples</u>	<u>Minimum Volume</u>
Benchmark	1/work area	1200L
Work Area	1/work shift	800L
Outside of Building	1/week	1200L
Adjacent to Work Area	3/work shift	1200L
At Negative Air Equipment exhausts	1/work shift	1200L

- 3.5.6.1.2 The Observation Service shall report the Area Air Monitoring results to the Contractor on the following day. If Area Air Monitoring results are unsatisfactory, the Contractor shall make changes in his engineering controls and work practices to assure compliance with the following standards. Unsatisfactory results are fiber counts within the Work Area in excess of the Maximum Acceptable Level or fiber counts outside the Work Area in excess of the Benchmark.
- 3.5.6.1.3 Personal Air Monitoring:

## Waterman Gardens - Abatement &amp; Demolition Services

- 3.5.6.1.3.1 Initial and periodic eight (8) hour TWA and thirty (30) minute excursion limit air monitoring of Worker exposures to airborne concentrations of Asbestos fibers shall be in accordance with OSHA (CFR 1926.1101) requirements.
  - 3.5.6.1.3.2 Once OSHA sampling requirements are satisfied the Contractor shall conduct, as a requirement of this Contract, not less than one (1) personal air sample, twice per calendar week, to determine 8-hour time-weighted average (TWA) exposures and thirty (30) minute Excursion Limit exposures of workers operating in each Work Area. Samples shall be collected within the Workers' breathing zones. Samples shall be taken for each ten (10) workers from the time preparation work is started until the Work Area has passed Clearance Testing. NOTE: Contract required personal sampling is not necessary while the Contractor is conducting OSHA required sampling or when Type C Respirators are in use.
  - 3.5.6.1.3.3 The Contractor shall report Personal Monitoring results to the Observation Service within 48 hours from the end of the work shift. Worker exposures to airborne Asbestos concentrations shall not exceed the Permissible Exposure Limit (PEL) of 8-hour time-weighted average (TWA) of 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air, or the 1f/cc 30 minute period Excursion Limit.
  - 3.5.6.1.4 Clearance Testing:
    - 3.5.6.1.4.1 PCM air sampling protocol will be required for the abatement of ACBM greater than small scale short duration work, more than or equal to 160 square feet or 260 linear feet.
    - 3.5.6.1.4.2 Contained Work Areas: The Contractor should not be released until final inspection and air testing are performed using Phase Contrast Microscopy (PCM) Methods in accordance with the guidelines set forth in Sections 6.4 and Appendix M of EPA Document 560/5-85-024 Guidance for Controlling Asbestos-Containing Materials in Buildings and with the exception that only one (1) air sample be taken for each Work Area and that 1,200 liters of air is required.
    - 3.5.6.1.4.3 Isolated and Nonprepared Work Area: The Observation Service shall take a minimum of one (1) nonaggressive air sample of 1,200 liters, upon completion of each Work Area. The "Clearance" sample will be analyzed by PCM Method No. 7400 and determined "clean" before removal of isolation material from the Work Area.
    - 3.5.6.1.4.4 If the tests show that the Work Area has not been decontaminated, the Contractor shall repeat the cleaning and/or encapsulation application until the Work Area is in compliance. For the purpose of this Project, decontamination for clearance testing by PCM Method No. 7400 shall be defined as air samples showing less than 0.01 fibers/cc. If the tests show that the Work Area has not been decontaminated, the Contractor shall repeat the cleaning and/or encapsulation application until the Work Area is in compliance.
- NOTE: Air sample volumes for Area and Clearance Monitoring (PCM analysis) may be adjusted in accordance with the quality assurance data of the microscopist and project conditions. Inside the Work Area, sample volumes shall, when project conditions allow, be sufficient to yield between 100 and 1,300 fibers per square millimeter on the membrane filter.

## 3.5.7 REIMBURSEMENT OF COSTS OF THE OWNER OR THE OBSERVATION SERVICE

3.5.7.1 In the event that reviews and/or Clearance Testing by the Observation Service or regulatory agencies shows that the Work Area or any portion of the Work Area is not decontaminated or if the Work is not in conformance with the Contract Documents, the Owner, Observation Service and his Consultants will record all time, tests and project related expenses expended to monitor the Work until the work is in compliance. All time, and expenses recorded by the Owner, Observation Service and his Consultants to monitor the above work, and all time, tests and project related expenses incurred by the Owner and Observation Service and his Consultants outside the Project Work Days, Work Hours or Contract Time shall, at the discretion of the Owner, be paid for by the Contractor. The Contractor, promptly upon receipt of the billing from the Owner, or the Observation Service, shall reimburse the Owner at the normal billing rate of the Owner or the Observation Service and his Consultants, or the Owner is authorized to withhold funds from the Contract Sum, for all time spent by the Owner, Observation Service and his Consultants for reviews, testing, and other project related expenses when any of the above conditions occur.

**3.5.8 STOPPING THE WORK**

3.5.8.1 If, at any time, the Observation Service decides that Work Practices are violating pertinent regulations, these Specifications or, in his opinion, endangering Workers or the public, he will immediately notify the Contractor (followed up in writing) that operations shall cease until corrective action is taken, and the Contractor shall take such corrective action before proceeding with the Work. Loss or Damages due to a Stop Work Order shall be borne by the Contractor.

**3.5.9 CLEAN UP**

3.5.9.1 Contractor shall maintain a clean Project site during and upon completion of the Project. Cleaning shall be in accordance with the General Conditions.

**4. LEAD ABATEMENT AND LEAD RELATED CONSTRUCTION WORK**

**4.1. GENERAL SUMMARY**

**4.1.1 SUMMARY**

4.1.1.1 Section Includes:

- 4.1.1.1.1 Abatement, Lead Related Construction Work of Lead-Based Glaze Coatings.
- 4.1.1.1.2 Removal and transportation and disposal of Lead-Based components.
- 4.1.1.1.3 Removal and disposal of Lead-Glazed Tubs as whole components.

4.1.1.2 Regulatory Requirements shall include, but not be limited to:

- 4.1.1.2.1 Cal/OSHA Title 8, California Code of Regulations (CCR)
- 4.1.1.2.2 California Air Resources Board Ambient Air Quality Standard, Title 24 CCR
- 4.1.1.2.3 California Department of Public Health, Title 17, CCR – Form 8551
- 4.1.1.2.4 Cal/EPA, Title 22 CCR Disposal and Transportation of Hazardous Waste
- 4.1.1.2.5 California Labor Code, Division 5, Part 1, as it pertains to safety in employment and with the applicable provisions of the Title 8, CCR as it pertains to Occupational Safety and Health in the work place.
- 4.1.1.2.6 HUD – Title X, Residential Lead-Based Paint Hazard Reduction Act of 1992
- 4.1.1.2.7 HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards as published in the 2nd Edition July 2012

**4.1.2 DESCRIPTION**

4.1.2.1 Work included: Contractor shall furnish all labor, materials, service, permits, insurance (specifically covering the handling and transportation of Lead Containing Materials and Lead

Containing Waste Materials), and equipment which is specified, shown, or reasonably implied for the following Lead Abatement activities:

- 4.1.2.1.1 The removal and disposal of Lead-Based Paint Components and Lead-Based Glaze Coating Ceramic Wall Tile with no replacement of removed materials per Cal/EPA Title 22 CCR disposal and transportation of hazardous materials. Following are the areas that will need to be abated:
  - 4.1.2.1.1.1 Restroom Wall Tiles – 92 Units
  - 4.1.2.1.1.2 Interior Door Jambs/Frames – 92 Units
  - 4.1.2.1.1.3 Windows (Entire Components) – 92 Units
  - 4.1.2.1.1.4 Exterior Fascia and Eaves – 92 Units
  - 4.1.2.1.1.5 Removal and disposal of Lead-Glazed Tubs and sinks as whole components from the Duplex’.
- 4.1.2.1.2 Submit unit pricing for the removal and disposal of any other additional Lead-Based or Lead-Containing materials as may be required by the owner of the property.

**NOTE: \*It is the responsibility of the abatement Contractor to verify all quantities and conditions in the field prior to bidding.**

#### 4.1.3 SECTION DEFINITIONS AND ACRONYMS

- 4.1.3.1 AAS - Atomic Absorption Spectrophotometry used for lead paint chip and dust wipe sample analysis.
- 4.1.3.2 Abatement – Any set of measures designed to reduce or eliminate lead hazards or Lead Based Paint for public and residential buildings, but does not include containment or cleaning. Procedures to reduce or eliminate lead hazards or lead-based paint for public and residential buildings.
- 4.1.3.3 Action Level – Means the Action Level as defined in Title 8, California Code of Regulations, Section 1532.1.
- 4.1.3.4 ANSI – American National Standards Institute
- 4.1.3.5 ASTM – American Society for Testing and Materials
- 4.1.3.6 Building ID number or code – A six digit alphanumeric identification code assigned to each building on an Owner site, also referred to as the insurance code, ID number or similar terms.
- 4.1.3.7 Certificate – Means the document issued by CDPH to an individual meeting the certification requirements as described in CCR Title 17, Sections 35083, 35085, 35087, 35089, or 35091.
- 4.1.3.8 Clean Room – An uncontaminated area or room which is a part of the worker Decontamination Enclosure System with provisions for storage of worker's street clothes and clean protective equipment.
- 4.1.3.9 Clearance Inspection – Means visual examination and, as applicable, collection of environmental samples upon completion of the Work of this section.
- 4.1.3.10 Component – Means a structural element or fixture, including but not limited to, walls, floors, ceilings, doors, window molding, trim, trestles, tanks, stairs, railings, cabinets, gutters, or downspouts.
- 4.1.3.11 Curtained doorway – A device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs may be submitted for review.
- 4.1.3.12 Decontamination – The process of eliminating lead contamination from building surfaces, and property by cloths, mops, or other utensils dampened with water and disposed of as lead contaminated waste.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.1.3.13 Decontamination Enclosure System Unit – A minimum a two-stage Decontamination unit consisting of a compartment for Decontamination, and a Clean Room. Unless otherwise specified, it shall be adjacent to the Abatement area.
- 4.1.3.14 Demolition – The wrecking or taking out of any load supporting structural member of a facility together with any related handling operations. The wrecking or removal of a facility, in whole or in part, along with any related debris handling operations.
- 4.1.3.15 Deteriorated Lead Based Paint – Means Lead Based Paint or a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from the substrate to which it is applied to.
- 4.1.3.16 CDPH – California Department of Public Health
- 4.1.3.17 CDPH-Approved Course – Means any lead-related construction course that satisfies the requirements specified in CCR Title 17, Sections 35056, 35061, 35066, or 35067 as determined by CDPHS pursuant to Sections 35076 and 35078.
- 4.1.3.18 DOSH – California Division of Occupational Safety & Health or Cal/OSHA.
- 4.1.3.19 DOT – Department of Transportation
- 4.1.3.20 DTSC – California Department of Toxic Substances Control
- 4.1.3.21 Encapsulating Material – Are coatings or rigid materials adhesively applied to Lead Based Painted surfaces in the Encapsulation process.
- 4.1.3.22 Encapsulation – The application of an Encapsulating Material to Lead Based Paint to provide a barrier between the Lead Based Paint and the environment.
- 4.1.3.23 Enclosure – A rigid durable barrier mechanically attached to building Component, with all edges and seams sealed with caulk or other sealant.
- 4.1.3.24 Fixed Object – A piece of equipment, furniture, or improvement in the Work Area, which cannot be removed from the Work Area.
- 4.1.3.25 Hazardous Waste – Means any waste stream determined by an Owner approved laboratory to exceed the regulatory thresholds for lead hazardous waste.
- 4.1.3.26 HEPA Filter – Means a filtering system capable of trapping and retaining at least 99.97% of all mono-dispersed particles 0.3 micrometers in diameter or larger.
- 4.1.3.27 HEPA Vacuum – A vacuum system furnished with HEPA filtration.
- 4.1.3.28 HUD – United States Department of Housing and Urban Development
- 4.1.3.29 HVAC – Heating, Ventilation, and Air Conditioning system.
- 4.1.3.30 ICP-AES – Means Inductively Coupled Plasma-Atomic Emission Spectroscopy used for heavy metal analysis, including lead.
- 4.1.3.31 Lead Based Paint – Means paint or other surface coatings that contain an amount of lead equal to or greater than 0.7 milligrams per square centimeter (0.7 mg/cm<sup>2</sup>) or equal to or greater than 0.5% by weight.
- 4.1.3.32 Lead Containing Paint – Means paint or other surface coatings that contain lead in an amount equal to or greater than 0.06% lead dry weight (600 ppm) but does not meet the definition of Lead Based Paint. In the absence of paint chip or surface coating bulk sample results, any surface coating shall be assumed to be above 0.06% lead dry weight (600 ppm) until surface coating samples are collected and analyzed that indicate otherwise. Lead concentration shall be determined by a method that has an accuracy of not less than plus or minus 25% at 0.06% lead dry weight, to a confidence level of 95%.
- 4.1.3.33 Lead Contaminated Dust – Means dust that contains an amount of lead equal to, or greater than, forty micrograms per square foot (40µg/ft<sup>2</sup>) on floors, two hundred and fifty micrograms per square foot (250µg/ft<sup>2</sup>) on interior window sills, and four hundred micrograms per square foot (400µg/ft<sup>2</sup>) on exterior floor and exterior horizontal window surfaces.
- 4.1.3.34 Lead Contaminated Soil – Means bare soil that contains an amount of lead equal to, or greater than, four hundred parts per million (400 ppm) in children’s play areas or one thousand parts per million (1000 ppm) in all other areas.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.1.3.35 Lead Hazard – Means deteriorated Lead Based Paint, Lead Contaminated Dust, Lead Contaminated Soil, the disturbance of Lead Based Paint or Presumed Lead Based Paint without containment, or any other operation that may result in persistent and quantifiable lead exposure.
- 4.1.3.36 Lead Inspection – Means a surface by surface investigation to determine the presence of Lead Based Paint as described in Chapter 7: Lead Based Paint Inspection, “ Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing,” U.S. Department of Housing and Urban Development, 1997 Revision.
- 4.1.3.37 Lead Related Construction Work – Means any construction, alteration, painting, Demolition, salvage, Renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing material or soil, may result in significant exposure of adults or children to lead.
- 4.1.3.38 Lead Safe Schools Program – Means the training program for lead safe working practices as developed by the Labor Occupational Health Program at U.C. Berkley.
- 4.1.3.39 Location Code – Refers to a unique four digit numeric code assigned by the Owner to each of its Project sites.
- 4.1.3.40 Member – A Component part of a structure complete in itself.
- 4.1.3.41 Movable Object – A piece of portable equipment or furniture in the Work Area, which can be removed from the Work Area.
- 4.1.3.42 NESHAP – The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 50.12)
- 4.1.3.43 NIOSH – The National Institute for Occupational Safety and Health
- 4.1.3.44 Owner Consultant (OC) – Refers to the firm, company or individual designated by the Owner.
- 4.1.3.45 Painting Contract – For purposes of this section, a painting contract is a Contract with the Owner to perform painting on existing facilities where Lead Based Paint, Lead Containing Paint, Presumed Lead Based or Presumed Lead Containing Paint will be disturbed or abated.
- 4.1.3.46 P.E.L. – Means permissible exposure limits as defined in Title 8, California Code of Regulations, Section 1532.1.
- 4.1.3.47 Plasticize – To cover floors, walls, and equipment with plastic sheeting as specified herein.
- 4.1.3.48 Portable Mechanical Ventilation System – A portable exhaust system furnished with HEPA filtration and capable of providing a constant air flow into regulated Work Area from adjacent areas and exhausted outside the regulated area.
- 4.1.3.49 Presumed Lead Based Paint – Means paint or surface coating affixed to a Component in or on a structure, excluding paint or surface coating affixed to a Component in or on a residential dwelling constructed on or after January 1, 1979, or a school constructed on or after January 1, 1993.
- 4.1.3.50 Removal – Means all operations where Lead Based Paint is removed or stripped from structures or substrates including demolition.
- 4.1.3.51 Renovation – Means the modifying of any existing structure, facility, or portion thereof.
- 4.1.3.52 Replacement – Means Removal of an entire building Component coated with Lead Based Paint and replacing it with a lead free Component.
- 4.1.3.53 SCAQMD – South Coast Air Quality Management District
- 4.1.3.54 STLC – Means Soluble Threshold Limit Concentration used in the State of California in conjunction with TTLC to determine lead hazardous waste limits. If the STLC result is equal to or exceeds 5 mg/L the waste is deemed to be hazardous.
- 4.1.3.55 Surfactant - A chemical wetting agent added to water.
- 4.1.3.56 TCLP – Means Toxicity Characteristic Leaching Procedure used to determine the federal Resources Conservation Recovery Act (RCRA) lead hazardous waste limits. If the results equal or exceed 5 mg/L the waste is deemed to be hazardous.
- 4.1.3.57 TTLC – Means Total Threshold Limit Concentration used in the State of California in conjunction with STLC to determine lead hazardous waste limits. If the results are equal to or exceeds 1000 mg/kg, the waste is deemed to be hazardous.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.1.3.58 Visible Emissions – Any emissions from a known or suspected lead-containing material that is visually discernible.
  - 4.1.3.59 Wet Cleaning – The process of eliminating lead contamination from building surfaces and/or objects by cloths, mops, or other utensils dampened with amended water and afterwards being disposed of as hazardous waste.
  - 4.1.3.60 Work Area – Means an area where known or Presumed Lead Based Paint is disturbed or Abatement is conducted.
  - 4.1.3.61 X-Ray Fluorescence (XRF) Analyzer – Means a direct reading instrument that determines the lead content of the surface coatings in milligrams per square centimeter (mg/cm<sup>2</sup>) using the principle of x-ray fluorescence.
- 4.1.4 POLICIES AND PROCEDURES
- 4.1.4.1 The Owner has a zero-tolerance policy for uncontrolled lead releases during Lead Related Construction Work, Lead Containing Paint disturbance, or Abatement activities. A lead release requiring an emergency response is any disturbance resulting in the uncontrolled release of lead containing materials. Upon observation of any visual emissions, immediately stop the Work, vacate the Work Area, and provide written notification to the Owner Consultant.
  - 4.1.4.2 Pre-qualified Abatement Subcontractors are not permitted to subcontract any Abatement Work to a lower tier Subcontractor without the prior written approval of the Owner.
  - 4.1.4.3 Do not furnish a reduced pressurization and filtration system in violation of, or in infringement upon, any patent.
  - 4.1.4.4 Owner Consultant shall provide oversight for all Projects that have the potential to disturb Lead-Based Glaze Coatings or Paint. Prior to the commencement of such Work, provide written notification to the Owner Consultant.
- 4.1.5 COORDINATION
- 4.1.5.1 Coordinate the Work of this section directly with the Owner and/or Owner Consultant.
- 4.1.6 SITE SECURITY
- 4.1.6.1 The Work Area is restricted to authorized, trained, and protected personnel. A list of authorized personnel shall be established and posted at the entrance of the Work Area by the Owner Consultant prior to commencement of the Work.
  - 4.1.6.2 Report to the Owner Consultant any unauthorized entry into the Work Area. Following notification, a written report of the incident shall be provided to the Owner Consultant.
  - 4.1.6.3 A logbook shall be maintained at the entrance of the Work Area. All persons entering the Work Area shall record name, company affiliation, time in, and time out for each entry and exit.
  - 4.1.6.4 Access to the Abatement Work Area shall be through the assigned work area perimeter entrance for each specified area. All other means of access shall be blocked or locked so as to prevent entry to or exit from the Work Area. Emergency exits shall be operable from inside the Work Area.
  - 4.1.6.5 Maintain Work Area security during Abatement and/or Lead Related Construction Work.
  - 4.1.6.6 Remove all barriers upon the completion of the Work of this section.
- 4.1.7 EMERGENCY PLANNING
- 4.1.7.1 Emergency planning and procedures shall be developed, submitted, reviewed, and agreed to by the Owner Consultant prior to the commencement of lead-related construction and/or Abatement Work.
  - 4.1.7.2 Emergency procedures shall be provided in the written languages understood by all employees working on the Project and shall be prominently posted at the entrance of the Decontamination Enclosure System. Prior to entering the Work Area, all parties must read and sign these procedures to acknowledge receipt and understanding of the work area layout, location of emergency exits, and emergency procedures.
  - 4.1.7.3 Emergency planning shall consider the effects of fire, explosion, toxic atmospheres, electrical

hazards, slips, trips and falls, confined spaces, and heat related injury. Develop and provide written procedures and training to all employees.

- 4.1.7.4 Employees shall be trained in evacuation procedures in the event of workplace emergencies.
- 4.1.7.5 In the event of non-life threatening situations requiring medical treatment, injured or otherwise incapacitated employees shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the Work Area.
- 4.1.7.6 In the event of life threatening injury or illness requiring immediate medical treatment, worker Decontamination shall be given minimum priority. Provide all measures to stabilize the injured worker, remove them from the Work Area and secure proper medical treatment.
- 4.1.7.7 Telephone numbers of all emergency response personnel shall be prominently posted at the entrance of the work area perimeter along with the location of the nearest telephone. In addition to the 911 emergency number, post the address and telephone number of the nearest emergency medical services provider.
- 4.1.7.8 Provide at least one (1) employee on the Project site at all times during progress of the Work that is trained and certified in first aid and cardiopulmonary resuscitation (CPR). This employee shall be identified by name and proof of training shall be provided to the Owner Consultant prior to the commencement of the Work of this section.
- 4.1.7.9 Provide at least one (1) 4A/60BC dry chemical extinguisher in the Decontamination compartment. All workers shall be trained in the proper operation of fire extinguishers.
- 4.1.7.10 Emergency exits shall be provided and clearly marked with arrows or other clearly visible markings to permit easy identification from anywhere within the work area. Exits shall be secured to prevent access from uncontaminated areas while still permitting emergency egress.

#### 4.1.8 LICENSING

- 4.1.8.1 The Work of this section shall be performed by an entity duly licensed in the State of California in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code, as amended.

#### 4.1.9 QUALIFICATIONS

- 4.1.9.1 Before any workers perform abatement work or work of this section where the P.E.L. is exceeded, submit proof of CDPH training and certification. No Work shall be performed until the Owner Consultant has reviewed and approved CDPH training and certifications.
- 4.1.9.2 All workers shall be in personal possession of a wallet CPDH certification card at all times while they are performing Abatement Work on the Project site.
- 4.1.9.3 All workers performing lead Abatement, Lead Related Construction Work, or disturbance of Lead Containing Paint where the exposure level exceeds the P.E.L. shall possess current CPDH certification and at least one CPDH Certified supervisor shall be assigned to the project as required by Title 17, CCR subsection 36100 AND ON-SITE AT ALL TIMES DURING THE ENTIRE ABATEMENT PROCESS.

#### 4.1.10 TRAINING

- 4.1.10.1 Lead Related Construction Work shall be performed by personnel with the following training, as applicable:
  - 4.1.10.1.1 The Lead Related Construction Work, specified herein, shall be performed by individuals trained and qualified in the techniques of lead-related construction, handling, disposal of lead-based and Lead Containing Paint, and the subsequent cleaning of contaminated areas. These individuals must comply with all applicable Federal, State, and Local regulations including, but not limited to, CPDH accredited training and certification, and must be capable of and willing to perform the Work of this section.



4.1.10.1.2 Training specific to the performance of Lead Related Construction Work shall be provided to employees prior to performing the Work of this section.

#### 4.1.11 EXPOSURE ASSESSMENT

- 4.1.11.1 Disturbance of Lead Containing Paint, as defined in this Specification, disturbed by tasks not included in Title 8, CCR Section 1532.1, Subsection (d)(2), shall require worker-exposure monitoring upon initiation of the Work. The workers performing these tasks shall be trained in accordance with the Hazard Communications Standard, Section 5194, including but not limited to, the requirements concerning warning signs and labels, Material Safety Data Sheets (MSDS), and employee information and training.
- 4.1.11.2 Provide an exposure assessment where the workers are performing Lead Related Construction Work. If historical data, collected within the 12 months prior to the work performed, indicates worker exposure is below the P.E.L., and the Work being performed closely resembles the process, type of material, control methods, work practices, and environmental conditions, additional exposure assessment is not required.
- 4.1.11.3 For Lead Related Construction Work where there is objective data or an exposure assessment demonstrating that the Lead Based Paint, or a specific process, operation or activity other than Abatement involving lead cannot result in employee exposure to lead at or above the P.E.L. during the specific process or handling, employees trained as required by Title 8, CCR Section 1532.1, including the training topics of the Lead-Safe Schools Program, may perform the Lead Related Construction Work.
- 4.1.11.4 Where Work being performed indicates an exposure above the Action Level, each employee is required to have current blood lead level and zinc protoporphyrin testing, medical clearance for negative pressure respirator use, and respirator fit testing.
- 4.1.11.5 If there is no objective data or a negative exposure assessment fulfilling the above requirements, all Lead Related Construction Work identified as a trigger task by Title 8, CCR 1532.1 shall be performed by workers who have received training as required by Title 8 CCR, Section 1532.1. This training shall, at a minimum, include the training topics of the Lead Safe Schools Program. An exposure assessment is required to be performed upon initiation of Work.
- 4.1.11.6 The required exposure assessment shall not exceed 12 months from the date the samples were collected to the date the Lead Related Construction Work or disturbance of Lead Containing Paint is performed.
- 4.1.11.7 The submission and review by the Owner Consultant of the objective data or exposure assessment is required prior to performing Lead Related Construction Work.

#### 4.1.12 SUBMITTALS

- 4.1.12.1 Prior to performing the Work of this section, submit the following procedures to the Owner Consultant:
  - 4.1.12.1.1 An Abatement plan including, but not limited to:
    - 4.1.12.1.1.1 A detailed written description of the measures and management procedures, including the containment that will be utilized during Abatement to prevent exposure to lead hazards. Shop Drawings shall indicate the containment locations.
    - 4.1.12.1.1.2 A detailed written description of the Abatement, including methods of Abatement, locations of rooms and building Component where Abatement is planned.
  - 4.1.12.1.2 Required air monitoring procedures (Cal/OSHA mandatory and SCAQMD permits for air filtering equipment).
  - 4.1.12.1.3 Decontamination procedures for personnel, work area, and equipment.
  - 4.1.12.1.4 Procedures for handling and disposing of waste materials, including disposal facility.
  - 4.1.12.1.5 Provide the procedures to be used for capturing debris while disturbing overhead materials. This procedure requires approval by the Owner Consultant before proceeding with the Work.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.1.12.1.6 Procedures for final Decontamination and cleanup.
- 4.1.12.1.7 Procedures for dealing with heat stress during Abatement.
- 4.1.12.1.8 Emergency procedures during Abatement.
- 4.1.12.2 Prior to performing Abatement Work of this section, submit the following Shop Drawings to the Owner Consultant:
  - 4.1.12.2.1 Preparation of Work Area.
  - 4.1.12.2.2 Layout and construction of Decontamination Enclosure System and barriers for isolation of the Work Area described in this Specification and required by applicable regulations.
- 4.1.12.3 Prior to performing the Work of this section, submit the following Product Data to the Owner Consultant:
  - 4.1.12.3.1 Product Data relative to personal protective equipment including respiratory protection and protective clothing.
  - 4.1.12.3.2 Material safety data sheets and technical specifications for proposed materials.
- 4.1.12.4 Prior to performing the Work of this section, submit the following notifications to the Owner Consultant:
  - 4.1.12.4.1 Evidence of notification to Cal/OSHA as required by Title 8 CCR, Section 1532.1, where applicable.
  - 4.1.12.4.2 Notify CPDH no less than five days in advance of Abatement by submitting an Abatement of Lead Hazard Notification, CPDH Form 8551.
- 4.1.12.5 Prior to performing the Work of this section, submit the following documentation to the Owner Consultant:
  - 4.1.12.5.1 A list of employees who will participate in the Project, including delineation of experience, training, and assigned responsibilities during the Project.
  - 4.1.12.5.2 Submit proof satisfactory to the Owner Consultant that required permits, site location, and arrangements for transport and disposal of lead containing waste has been performed in accordance with Federal, State, and local regulations.
  - 4.1.12.5.3 Submit proof of training for each worker who will perform Abatement or Lead Related Construction Work.
  - 4.1.12.5.4 Submit manufacturer's certification that HEPA Vacuums, air filtration units and other local exhaust ventilation equipment conform to ANSI Z9.2-79, as applicable.
  - 4.1.12.5.5 Provide the current SCAQMD permit for each HEPA Vacuum and Portable Mechanical Ventilation System before they are brought onto the Project site.
  - 4.1.12.5.6 Where biological monitoring is required, submit test result documentation verifying all employees have completed blood lead level and zinc protoporphyrin tests in accordance with Title 8 CCR, Section 1532.1.
- 4.1.12.6 Prior to performing the Work of this section, submit the following schedule to the Owner Consultant:
  - 4.1.12.6.1 An intended sequence of Work and construction schedule. Coordinate both the sequence and durations with the Owner.
- 4.1.12.7 During the performance of the Work of this section, submit the following documentation to the Owner Consultant:
  - 4.1.12.7.1 Submit documentation from a physician certifying that all employees who wear a negative pressure respirator are medically cleared to do so without suffering adverse health effects as required by DOSH regulations. The certification shall state that the employee or agent may perform Lead Related Construction Work and wear a negative pressure respirator without restrictions. Provide information to the examining physician about unusual conditions in the workplace environment that may impact the employee's ability to perform Work activities.
  - 4.1.12.7.2 During the performance of the Work of this section, and before additional supervisors or workers are permitted to perform the Work of this section, submit proof of CPDH training and certification, where applicable. No additional supervisors or workers are permitted upon the Project site until the Owner Consultant has approved the DHS training and certifications, when required.
  - 4.1.12.7.3 Submit weekly job progress reports detailing Abatement and/or Lead Related

Construction Work activities for Projects that will exceed thirty (30) days. Include review of progress with respect to previously established Milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and air and/or wipe sampling results.

- 4.1.12.7.4 Within five (5) workdays of transport and/or disposal, submit copies of all transport manifests, disposal receipts, analytical data, and weight certificates for all hazardous waste removed from the Work Area during the Lead Related Construction Work and/or Abatement Work. Weight certificates shall indicate by pounds the net weight of waste disposed of from the Project site as indicated on the associated manifest.
- 4.1.12.7.5 Submit results of air and/or wipe sampling data (as applicable) collected during the course of the Abatement and/or Lead Related Construction Work including DOSH compliance air monitoring results.

## 4.2 PRODUCTS

### 4.2.1 MATERIALS AND EQUIPMENT

#### 4.2.1.1 Materials:

- 4.2.1.1.1 Deliver all materials in the original sealed packages, containers, or bundles bearing the name of the manufacturer and brand name.
- 4.2.1.1.2 Store all materials, subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient enough to prevent damage or contamination. Replacement materials shall be stored outside of the Work Area until area is cleared for normal occupancy.
- 4.2.1.1.3 Damaged, deteriorating, or previously used materials shall not be furnished and shall be removed from the Project site and legally disposed of.
- 4.2.1.1.4 A sufficient supply of disposable mops, rags, and sponges for Work Area Decontamination shall be provided.
- 4.2.1.1.5 Unless otherwise specified, the Owner will provide water for construction purposes. Connect to existing system as required.
- 4.2.1.1.6 All products brought onto the Project site shall be accompanied by their respective Material Safety Data Sheet, which shall be maintained on the Project site.
- 4.2.1.1.7 All plastic, polyethylene sheeting or Visqueen shall be a fire retardant type. Provide documentation from the manufacturer verifying compliance with this requirement.
- 4.2.1.1.8 Polyethylene sheeting furnished for the Decontamination Enclosure System shall be opaque white or black in color and shall be a minimum of 6-mil thick.
- 4.2.1.1.9 Surfactant (wetting agent) shall be a material that, when tested, demonstrates a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-56-"Surface and Interfacial Tension of Solutions of Surface Active Agents." Where Work Area temperature may cause freezing of the Amended Water solution, the addition of approved antifreeze in a manufacturer recommended amount is permitted.

#### 4.2.1.2 Equipment:

- 4.2.1.2.1 Disposal bags shall be of 6-mil polyethylene, pre-printed with labels as required by applicable Cal/OSHA and DOT requirements.
- 4.2.1.2.2 Provide labels as per DOT requirements for disposal containers.
- 4.2.1.2.3 Provide warning signs as required by Cal/OSHA.
- 4.2.1.2.4 Disposal containers shall meet requirements of Title 22, CCR.
- 4.2.1.2.5 Provide a sufficient supply of scaffolds, ladders, lifts, and hand tools, as needed to complete the Work.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.2.1.2.6 Provide sprayers with pumps capable of providing amended water in sufficient quantity to adequately wet the material to be abated or for Lead Related Construction Work.
- 4.2.1.2.7 Provide a sufficient supply of HEPA filtered vacuums to maintain a clean environment in compliance with this section.
- 4.2.1.2.8 When an enclosure requiring negative pressure is specified, a sufficient quantity of air-filtration ventilation units furnished with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance documents shall be utilized to provide one workplace air change every 15 minutes and creating a pressure differential of -0.02 inches of water everywhere within the enclosure when compared to the area outside the enclosure. A log documenting the filter change history of each unit shall be required before use, and any unit without this log shall have all filters changed and the unit decontaminated.
- 4.2.1.2.9 When rental equipment is to be used in Abatement areas or to transport lead contaminated waste, a written notification concerning the intended use of the rental equipment shall be provided to the rental agency with a copy submitted to the Owner.
- 4.2.1.2.10 When performing chemical Removal, provide portable eyewash station(s) that meet ANSI standards and are accessible to workers within 10 seconds.
- 4.2.1.2.11 Additional safety equipment, as necessary, shall be provided to all workers and authorized visitors.
- 4.2.1.2.12 All equipment delivered to the Project site shall be free of all debris suspect of containing lead. No equipment with suspect debris in or on it shall be permitted on Owner properties and/or the Project site.
- 4.2.1.2.13 Lighting shall be provided in an amount sufficient to illuminate the Work Area for the purpose of safe visual working conditions and to permit examination of all surfaces where Work is performed.

#### 4.2.2 EMPLOYEE PERSONAL PROTECTIVE EQUIPMENT

##### 4.2.2.1 Respiratory Protection:

- 4.2.2.1.1 Submit NIOSH approvals for all respiratory protective devices utilized on the Project site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters. Filter cartridges shall be furnished with the NIOSH P-100 designation.
- 4.2.2.1.2 Provide respiratory protection to all employees in compliance with CCR Title 8, Sections 1532.1 and 5144, as determined by the employee exposure assessment.
- 4.2.2.1.3 In the absence of an exposure assessment, base respiratory protection on the requirements of Title 8, CCR Section 1532.1, specifically subsection (d).
- 4.2.2.1.4 In addition to P-100 filters, provide the appropriate respirator filter cartridges for exposure to other airborne contaminants generated during the Abatement process.

##### 4.2.2.2 Fit Testing:

- 4.2.2.2.1 Perform fit testing in accordance with Title 8 CCR, Section 5144.
- 4.2.2.2.2 Submit documentation of respirator fit testing for all individuals entering the Work Area.
- 4.2.2.2.3 Maintain and submit to the Owner a copy of the written respiratory protection program.

##### 4.2.2.3 Personal Protective Clothing and Equipment:

- 4.2.2.3.1 Provide eye protection to employees sufficient to protect employees from debris during Work progress when full-face respirators are not being utilized.
- 4.2.2.3.2 Provide and require the use of eye protection when employees are working with a material that may splash or fragment, as specified by the Material Safety Data Sheet for a given product, or as required by Title 8, CCR.
- 4.2.2.3.3 Spectacle kits and eyeglasses must be provided for employees who wear glasses and who must wear full-face piece respirators. Provide respirators that have been tested and approved by the National Institute of Occupational Safety and Health for use in lead-contaminated atmospheres.

- 4.2.2.3.4 Provide full-body disposable protective clothing, including head, body, and foot coverings to all workers and authorized visitors who enter the Work Area, in sizes adequate to accommodate movement without tearing. A new suit shall be provided and donned for each separate entry.
- 4.2.2.3.5 If washable clothing is to be worn underneath disposable protective clothing, it shall be provided to all Abatement workers.
- 4.2.2.3.6 Provide a clean staging area for workers and others to store street clothes and personal protective equipment.
- 4.2.2.3.7 Disposal suits shall be collected in an appropriate disposal container at the entrance of the Abatement Work Area.
- 4.2.2.3.8 Abatement workers are required to wear nonskid footwear sufficient to protect them from workplace hazards. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
- 4.2.2.3.9 Hand protection shall be provided, and workers shall be required to use lotion sufficient quantities to protect the worker when chemicals or other physical hazards exist.
- 4.2.2.3.10 As required by the Work site and applicable safety regulations, provide head protection and require the use thereof.
- 4.2.2.3.11 All worker protection equipment shall be ANSI approved.

### **4.3 EXECUTION**

#### **4.3.1 LEAD RELATED CONSTRUCTION WORK**

##### **4.3.1.1 Work Area Preparation and Work Practices:**

- 4.3.1.1.1 Where exposure monitoring indicates Worker exposure is below the P.E.L. comply with the requirements of this section and the "Monitoring" section of this Specification.
- 4.3.1.1.2 All disturbance of lead containing materials shall be performed using wet methods.
- 4.3.1.1.3 Work requiring overhead disturbances shall require a means of capturing debris, thus preventing an uncontrolled release on the worker or the surfaces below.
- 4.3.1.1.4 For disturbances utilizing local exhaust dust collection devices the equipment shall be designed and furnished with a HEPA filtered vacuum attachment approved by the manufacturer.
- 4.3.1.1.5 Where Components are to be removed, all loose Lead Based Paint and Lead Containing Paint shall be removed by manual means using wet methods and Stabilized prior to removal.
- 4.3.1.1.6 Where a Component is attached and painted onto another surface and the Component is to be removed from the adjoining surface the paint shall be cut with a razor knife to reduce the potential of paint chip debris during Component removal.
- 4.3.1.1.7 If a Component being removed will be disposed of rather than reinstalled, manually cut the Component into manageable sections for disposal using wet methods or mechanically cut using a manufactured approved HEPA filtered local exhaust dust collector.
- 4.3.1.1.8 If a Component is to be reused, loose paint or rough edges may require scraping or sanding. All scraping or sanding must be performed manually using wet methods or mechanically with a manufactured approved HEPA filtered local exhaust attachment.

##### **4.3.1.2 Clean Up Procedures:**

- 4.3.1.2.1 During the entire process of Lead Related Construction Work, clean all debris generated using wet methods and/or HEPA Vacuuming.
- 4.3.1.2.2 At the completion of the Lead Related Construction Work, clean all surfaces within the impacted Work Area.
- 4.3.1.2.3 When HEPA filtered Vacuums are utilized, vacuum from the area of impact to the outer perimeter of the polyethylene sheeting to remove all visible debris. If vacuuming cannot remove all visible debris, wet wiping will also be required.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.3.1.2.4 When wet wiping the Work Area, wipe from the area of impact to the outer perimeter of the polyethylene sheeting to remove all visible debris.
- 4.3.1.2.5 All tools and equipment utilized in the Work Area shall be thoroughly wet wiped to remove visible debris.

#### 4.3.2 ABATEMENT

##### 4.3.2.1 Work Area Preparation:

- 4.3.2.1.1 Clean areas to be isolated by HEPA Vacuum prior to installation of polyethylene sheeting.
- 4.3.2.1.2 Install a minimum of one (1) layer of 6 mil thick polyethylene sheets on floors, fastened by waterproof tape and other means as necessary to secure the sheeting.
- 4.3.2.1.3 The covering on windows, exterior doors, and vents shall be installed from the inside to facilitate Work on them from the outside.

##### 4.3.2.2 Decontamination Enclosure System:

- 4.3.2.2.1 At a minimum a two-stage Decontamination Enclosure System consisting of a compartment for Decontamination and a Clean Room shall be constructed and used.
- 4.3.2.2.2 Unless otherwise specified, the Decontamination Enclosure System shall be adjacent to the Abatement area.
- 4.3.2.2.3 Other enclosure methods may be used if submitted and approved by the Owner Consultant.

##### 4.3.2.3 Removal of all Lead-Based Glaze Coating Wall Tile:

- 4.3.2.3.1 All manual or mechanical removal will be performed using wet methods.
- 4.3.2.3.2 Machine Chippers can only be used within a negative pressure enclosure system.
- 4.3.2.3.3 Protect adjacent surfaces from damage from machine chipping. Repair and/or replace all damaged surfaces.

##### 4.3.2.4 ALTERNATE PROCEDURES

- 4.3.2.4.1 If specified procedures cannot be utilized, a request must be made in writing to the Owner Consultant establishing details of the problem encountered and recommended alternatives.
- 4.3.2.4.2 Alternate procedures shall provide equivalent or greater protection than procedures that they replace.
- 4.3.2.4.3 Prior to implementation, all alternative procedures shall be submitted and approved in writing by the Owner Consultant.

##### 4.3.2.5 CLEAN-UP PROCEDURES

- 4.3.2.5.1 During the entire process of the Work of this section, perform continuous cleaning of all debris generated using wet methods and/or HEPA filtered vacuuming.
- 4.3.2.5.2 At the completion of the Work of this section, clean all surfaces within the impacted Work Area, including but not limited to, all tools, equipment, and polyethylene sheeting to remove visible debris from the Work Area.
- 4.3.2.5.3 All tools and equipment utilized in the Work Area shall be thoroughly cleaned. All non-electrical tools and equipment shall be cleaned monthly and before Removal from the Work Area by HEPA vacuuming and washing using a lead specific detergent or other suitable cleaning agent.
- 4.3.2.5.4 Electrical tools and equipment shall be HEPA vacuumed and cleaned by wet wiping limiting the amount of water used to avoid electrical hazards.
- 4.3.2.5.5 Remove polyethylene sheeting, except for critical barriers, by folding it into itself beginning with the higher level polyethylene first.
- 4.3.2.5.6 Following Removal of polyethylene sheeting a final cleaning of all surfaces in the Abatement workspace shall be performed by HEPA vacuuming, wet wiping, and a final HEPA vacuuming.

- 4.3.2.5.7 Refer to the waste handling and transportation section of this Specification for disposal of waste generated by this process.
- 4.3.3 WASTE HANDLING AND TRANSPORTATION:
  - 4.3.3.1 Characterization of Waste:
    - 4.3.3.1.1 Until analytical results are available, all waste materials (including water) shall be treated as hazardous.
    - 4.3.3.1.2 Characterize all waste streams as follows:
      - 4.3.3.1.2.1 Collect a representative sample of the waste material.
      - 4.3.3.1.2.2 For a pile of waste take one sample of a proportionate combination of Component in the pile. If a large quantity of waste is generated no less than four samples may be required.
      - 4.3.3.1.2.3 For large wood Component, such as windows, doors, etc., a representative sample of each Component of similar characteristics, paint history, etc., shall be collected and tested. A full depth core sample, not less than one (1) inch diameter, of the Component is to be collected. The core sample shall include the substrate and paint coatings on both sides of the Component, as applicable.
    - 4.3.3.1.3 Analysis for the waste characterization samples shall be performed as follows:
      - 4.3.3.1.3.1 Waste generated by chemical stripping shall, in addition to the requirements for determining the solid and soluble lead concentrations, shall be tested for corrosiveness and other contaminants, as applicable, resulting from the chemical stripping process.
      - 4.3.3.1.3.2 Analyze samples for Total Threshold Limit Concentration (TTL):
        - 4.3.3.1.3.2.1 If results are less than 50 mg/kg (milligrams/kilogram) the waste is not hazardous and shall be disposed as general construction waste at a class III disposal site.
        - 4.3.3.1.3.2.2 If sample results are 50 mg/kg or greater, the waste shall be tested for Soluble Threshold Limit Concentration (STLC).
      - 4.3.3.1.3.3 Where waste is required to be tested for STLC the following shall apply:
        - 4.3.3.1.3.3.1 If the STLC result is less than 5 mg/L (milligrams/liter) the material shall be disposed at a Class II waste landfill. Evidence of such results of the STLC testing will be required by the landfill before waste is accepted. No further testing is required.
        - 4.3.3.1.3.3.2 If the STLC results are 5 mg/L or greater, the waste is a California regulated waste and the material shall be tested using the federally mandated Toxicity Characterization Leaching Procedure (TCLP).
      - 4.3.3.1.3.4 Where waste is required to be tested by TCLP the following shall apply:
        - 4.3.3.1.3.4.1 If the TCLP is less than 5 mg/L, the waste is a California regulated hazardous solid waste (non-RCRA). This material shall be disposed in a Class I hazardous waste landfill.
        - 4.3.3.1.3.4.2 If the TCLP is equal to or greater than 5 mg/L, the waste is a federally regulated hazardous waste solid (RCRA). The waste shall then be disposed in a Class I hazardous waste landfill.
      - 4.3.3.1.3.5 Personal and commercial wash water with lead contamination shall be handled as follows:
        - 4.3.3.1.3.5.1 Filter the waste water through cheesecloth, or other similar filtering media, to remove the gross debris. Separate the waste streams and characterize these in compliance with this Specification.
        - 4.3.3.1.3.5.2 If the waste water is identified as a RCRA or California regulated hazardous waste (Non-RCRA) by STLC and TCLP, filter the waste water by power pumping it through a 20 micron pore size filter. The filtered water shall be tested as described for waste in this Specification.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.3.3.1.3.5.3 If test results categorize the filtered water as non-hazardous, it may be disposed of in the sewer system.
- 4.3.3.1.3.5.4 Wastewater, filtered or otherwise, shall not be discharged in storm drains, gutters or allowed to sheet flow over the surface of the ground.

4.3.3.2 Waste Handling:

- 4.3.3.2.1 All waste, hazardous and non-hazardous, shall be disposed of at an authorized site in accordance with all provisions of this Specification and applicable Federal, State, and local laws.
- 4.3.3.2.2 Any waste determined to be hazardous, through analytical testing, shall be kept in a secured area or lockable container that is inaccessible to all persons other than authorized personnel working on the Project. All hazardous waste containers shall be labeled "Hazardous-Waste – Contains Lead" and labeled with the date waste collection commenced.
- 4.3.3.2.3 Hazardous waste shall not remain on the Project site beyond 90 days of the date it was generated. It shall be removed from the Project site and transported to an approved landfill before the 90 days has elapsed.
- 4.3.3.2.4 Once hazardous waste is removed from the Project site, ensure it is disposed of in an approved landfill within 6 days. The waste shall not be transported to another site for commingling of waste from a source other than the site of original generation. This requirement shall be documented by the proper execution of a Uniform Hazardous Waste Manifest signed by the landfill operator.
- 4.3.3.2.5 All hazardous and non-hazardous waste shall be kept in different containers and stored in separate locations. Commingling of waste is not permitted.
- 4.3.3.2.6 As the Work progresses, to prevent exceeding available storage capacity on the Project site, sealed and labeled containers of lead waste shall be removed and transported to the prearranged disposal location.
- 4.3.3.2.7 Containers used for hazardous waste shall meet the requirements of EPA and DOT for hazardous waste storage and transport. At a minimum, disposal packaging of Lead Based Paint fragments, dust, and debris shall be in 6-mil polyethylene (plastic) bags that are airtight and puncture resistant.
- 4.3.3.2.8 Any debris or residue observed on containers or surfaces outside of the Work Area resulting from clean up or disposal activities shall immediately be cleaned using HEPA filtered vacuum equipment and/or wet methods as appropriate.
- 4.3.3.2.9 Materials not contained in bags or other appropriate disposal containers shall not be placed in lead waste storage containers, nor shall storage containers be used for non-lead waste. To avoid damage, all packaged waste shall be placed, not thrown, into the storage containers.

4.3.3.3 Transportation of Non-Hazardous Waste:

- 4.3.3.3.1 All receipts from the disposal facility, trip tickets, transportation manifests, weight certificates or other documentation of disposal shall be delivered to the Owner Consultant within 48 hours of disposal. The waste manifest shall be signed by the generator, the transporter(s), and the disposal site operator each time the waste material is transferred. If a separate hauler is employed, the name, address, and signature of the transporter shall also appear on the manifest.

4.3.3.4 Transportation of Hazardous Waste:

- 4.3.3.4.1 All hazardous waste shall be transported by a RCRA/DOT/EPA certified hazardous waste transporter. Provide evidence that the hazardous waste transporter meets the requirements of this Specification.
- 4.3.3.4.2 The Work of this section includes responsibility for all actions of the hazardous waste transporter as it pertains to waste Removal and disposal related to the Work of this Specification.



IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.3.3.4.3 Identify the facility to which the waste generated by this Specification will be taken. Evidence shall be provided verifying the facility is licensed/permitted to receive and handle non-hazardous lead containing waste and/or hazardous lead containing waste as applicable.
- 4.3.3.4.4 All waste disposed as hazardous shall be transported under a Uniform Hazardous Waste Manifest. The generator copy of this manifest shall be submitted to the Owner Consultant within five (5) days of transport.
- 4.3.3.4.5 All dump receipts, trip tickets, transportation manifests, weight certificates or other documentation of disposal shall be delivered to the Owner Consultant within 48 hours of disposal. The Uniform Hazardous Waste Manifest shall be signed by the generator (or designee), the transporter(s), and the disposal site operator each time the responsibility for the waste material is transferred. If a separate hauler is employed, the name, address, U.S.E.P.A. ID number and signature of the transporter shall also appear on the manifest.
- 4.3.3.4.6 The enclosed cargo area of trucks or containers shall be free of debris and lined with 6-mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the walls. Wall sheeting shall be overlapped and taped into place.
- 4.3.3.4.7 During transport, drums and other containers shall be placed on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Large structural Component shall be secured to prevent shifting and bags placed on top.

#### 4.3.4 MONITORING

##### 4.3.4.1 Project Management and Inspection:

- 4.3.4.1.1 Owner has the right to perform air, wipe, and visual monitoring at anytime.
- 4.3.4.1.2 Owner shall proceed in accordance with the terms and conditions of the Contract Documents whenever the Work or protective measures are not in compliance with applicable governmental regulations, Contract requirements, and/or threatens the adjoining environment with lead contamination.
- 4.3.4.1.3 Where exposure monitoring indicates exposures is at or above the P.E.L., complies with Title 8, CCR Section 1532.1 (e) through (n).

##### 4.3.4.2 Employee – Personal Air Monitoring:

- 4.3.4.2.1 Provide air monitoring as required by Title 8 CCR, Section 1532.1. Results shall be provided within ten working days of sampling. If the intent is to utilize such as exposure assessment documentation, and Work is to commence earlier than ten working days, submit results 24 hours in advance of the start of Work.

##### 4.3.4.3 Clearance Inspection:

###### 4.3.4.3.1 Clearance Inspection for Lead Related Construction Work shall include:

- 4.3.4.3.1.1 A visual inspection of the Work Area by the Owner Consultant prior to occupancy for normal activity.
- 4.3.4.3.1.2 Do not remove barriers designating a regulated Work Area until a written release from the Owner Consultant is provided.
- 4.3.4.3.1.3 The Owner Consultant has the right to collect wipe samples as part of the Clearance Inspection.

###### 4.3.4.3.2 Clearance Inspection for Abatement shall include:

- 4.3.4.3.2.1 A visual inspection of the Work Area by the Owner Consultant prior to collection of environmental samples (dust, wipe, and/or soil samples)
- 4.3.4.3.2.2 Owner Consultant shall collect environmental samples.
- 4.3.4.3.2.3 Results of samples shall comply with Title 17, CCR before the Work Area is released for normal occupancy.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 4.3.4.3.2.4 Where samples fail to meet regulated clearance levels of Title 17, CCR, clean the Work Area as required for final cleaning in the Clean Up Procedures section of this Specification.
- 4.3.4.3.2.5 Following cleaning, the visual inspection and environmental sampling will be repeated as described above. This process shall continue until the clearance level of Title 17, CCR is provided.

4.3.5 RE-ESTABLISHMENT OF THE WORK AREA AND SYSTEMS

- 4.3.5.1 Re-establishment of the Work Area shall only occur following the completion of clean-up procedures and after a Clearance Inspection has been performed and documented to the satisfaction of the Owner Consultant.
- 4.3.5.2 Re-secure Moveable Objects removed from their former positions during area preparation activities.
- 4.3.5.3 Relocate Moveable Objects that were removed to temporary locations back to their original positions.
- 4.3.5.4 Repair all areas of damage that occurred as a result of Abatement or Lead Related Construction Work.

4.3.6 PROJECT COMPLETION DOCUMENTATION

- 4.3.6.1 Provide to the Owner Consultant all of the following close-out documentation:
  - 4.3.6.1.1 Filter change logs for all air filtration units, water filtration units and respirators
  - 4.3.6.1.2 Foreman's daily job reports
  - 4.3.6.1.3 Employee entry/exit logs for all Work Areas
  - 4.3.6.1.4 Visitor entry/exit logs for all Work Area
  - 4.3.6.1.5 Air sample results for personnel
  - 4.3.6.1.6 Copies of all hazardous and non-hazardous waste manifest
  - 4.3.6.1.7 All hazardous waste weight tickets
  - 4.3.6.1.8 Analytical data and chain of custody for waste characterization
  - 4.3.6.1.9 All signed Daily Personnel Report Forms

## 5. STORMWATER

### 5.1. GENERAL – PART 1

#### 5.1.1 DESCRIPTION

Work included –Contractor shall furnish all labor, materials, services, permits, insurance, and equipment which is specified, shown or reasonably implied for the compliance with the following laws and regulations:

- 5.1.1.1 State Water Resources Control Board (SWRCB). “Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination Systems (NPDES) General Permit No. CAS000002, Stormwater Discharge Associated with Construction Activity and Land Disturbance Activities” (“Permit”), Amended by 2010-0014-DQ and 2012-006-DWQ.
- 5.1.1.2 California Stormwater Quality Association (CASQA). “2015 CASQA Construction BMP Handbook – Construction”, BMP Construction Information Fact Sheets.
- 5.1.1.3 Stormwater Pollution Prevention Plan. “SWPPP Ludwig Engineering Waterman Gardens Abatement & Demo 02-05-18” .

#### 5.1.2 DEFINITION

- 5.1.2.1 **active area:** Area where soil-disturbing work activities have occurred at least once within 15 days.
- 5.1.2.2 **construction phase:** Phase that includes the (1) demolition work being done on this site, including abatement, demolition of buildings, accessories and removal of trees; (2) waste or debris removal; (3) mulching for final stabilization, and (4) the suspension phase for suspension of work activities or a winter shutdown. The construction phase starts at the start

of job site activities and ends at Contract acceptance.

- 5.1.2.3 **inactive area:** Area where soil-disturbing work activities have not occurred within 15 days.
- 5.1.2.4 **qualifying rain event:** Storm that produces at least 0.5 inch of precipitation with a 48-hour or greater period between rain events.
- 5.1.2.5 **run-on:** Water that originates off-site and flows onto the job site.
- 5.1.2.6 **storm event:** Storm that produces or is forecasted to produce at least 0.10 inch of precipitation within a 24-hour period.

### 5.1.3 SUBMITTALS

- 5.1.3.1 Training: For all employees and subcontractors who will be working at the job site, submit Stormwater pollution training records as informational submittals. The records must include the training subjects and dates for the initial training, ongoing training, and tailgate meetings. Submit records for:
  - 5.1.3.1.1 Existing employees within 5 business days of Contract approval.
  - 5.1.3.1.2 New employees within 5 business days of receiving the training.
  - 5.1.3.1.3 Subcontractors' employees at least 5 business days before a subcontractor starts work.
- 5.1.3.2 Materials: Submit manufacturer's information on materials used for the erosion control devices (BMP's) within 5 business days of Contract approval.
- 5.1.3.3 Forms: Submit inspection report forms within 5 business days of Contract approval or use the current CASQA forms for monitoring reports.
- 5.1.3.4 Other reports and forms, including REAP, forecasts, inspection reports, etc. shall be submitted to Owner routinely throughout contract.
- 5.1.3.5 Name of Laboratory to be used for testing.

## 5.2 MONITORING – PART 2

- 5.2.1 Contractor's Water Quality Monitor
  - Within 7 days after Contract approval, submit the name and qualifications of your water quality monitor. Include the monitor's training and experience in collecting and analyzing water quality samples.
- 5.2.2 Monitoring Required
  - 5.2.2.1 Weather Forecasts – Check weather daily. Submit weather forecasts weekly. The WQM should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at <http://www.srh.noaa.gov/>. Submit forecasts to Owner weekly.
  - 5.2.2.2 Rain Event Action Plan – Prepare and submit a rain event action plan (REAP) at least 48 hours before a forecasted storm event if the NOAA predicts a storm event with at least a 50 percent probability of precipitation within 72 hours. REAP includes:
    - 5.2.2.2.1 Site Address;
    - 5.2.2.2.2 Risk Level - 2;
    - 5.2.2.2.3 Site Stormwater Manager Information including the name, company and 24-hour emergency telephone number;
    - 5.2.2.2.4 Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number;
    - 5.2.2.2.5 Stormwater Sampling Agent information including the name, company, and 24-hour emergency telephone number;
    - 5.2.2.2.6 Activities associated with each construction phase;
    - 5.2.2.2.7 Trades active on the construction site during each construction phase;
    - 5.2.2.2.8 Trade contractor information; and
    - 5.2.2.2.9 Recommended actions for each project phase.

Contractor shall have the REAP at the job site at least 24 hours before a forecasted storm event. For a project that requires a REAP, implement the plan, including crew mobilization, at least 24 hours before precipitation occurs.

Contractor shall retain a printed copy of each REAP at the job site as part of the SWPPP. Submit REAP to Owner least 24 hours before a forecasted storm event.

5.2.2.3 Weekly, Pre-, During and Post- Storm Inspections – Complete inspections and submit reports routinely. Pre- Storm Inspections shall be done within 24 hours of forecasted qualifying event. During Storm Inspections shall be done daily during qualifying events. Post- Storm Inspections shall be completed within 24 hours of the end of a qualifying event. Inspections required include:

- 5.2.2.3.1 Visual inspections of Best Management Practices (BMP’s);
- 5.2.2.3.2 Visual monitoring of the site related to qualifying storm events;
- 5.2.2.3.3 Visual monitoring of the site for non-stormwater discharges;
- 5.2.2.3.4 Sampling and analysis of construction site runoff for pH and turbidity;
- 5.2.2.3.5 Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- 5.2.2.3.6 Sampling and analysis of non-stormwater discharges when applicable.

Submit signed inspection forms to Owner within 48 hours of inspection.

5.2.2.4 Daily Inspections – Check for:

- 5.2.2.4.1 Oil, gas or other leaks from equipment
- 5.2.2.4.2 Leaks at connection to water source
- 5.2.2.4.3 Dust or litter on streets
- 5.2.2.4.4 Waste bins and stockpiles covered at end of each work shift.

5.2.2.5 Notification – Notify the Owner within 6 hours whenever:

- 5.2.2.5.1 Discharges into receiving waters or drainage systems are causing or could cause water pollution.
- 5.2.2.5.2 A written notice or order for the project from the RWQCB or any other regulatory agency is received.

**5.3 NUMERIC ACTION LEVEL (NALs) – PART 3**

5.3.1 Numeric Action Levels

For a risk level 2 test discharges to the receiving water under the test methods and at the detection limits for the NALs shown in the following table:

Quality characteristic	Test method	Detection limit (min)	NAL
Turbidity (max, NTU)	Field test with calibrated portable	1	250
pH	Field test with calibrated portable	0.2	6.5–8.5

5.3.2 Sampling

5.3.2.1 See Sampling Plan in Section 600 of SWPPP.

5.3.2.2 Assign trained personnel to collect water quality samples. The personnel must comply with the equipment manufacturer's instructions for the collection of samples, analytical methods, and equipment calibration.

- 5.3.2.3 Samples taken for laboratory analysis must comply with water quality sampling procedures and be analyzed by a State-certified laboratory under 40 CFR part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants.
- 5.3.2.4 For a risk level 2 or risk level 3 project, take samples for pH and turbidity from representative and accessible locations upstream and downstream of the discharge point. For multiple discharge points, obtain samples from a single upstream and a single downstream location.
- 5.3.3 Exceedance Reports - If a NAL is exceeded, notify the Owner and submit an exceedance report within 48 hours after the conclusion of a storm event. The report must include:
  - 5.3.3.1 Field sampling results and inspections, including:
    - 5.3.3.1.1 Analytical methods, reporting units, and detection limits
    - 5.3.3.1.2 Date, location, time of sampling, visual observations, and measurements
    - 5.3.3.1.3 Quantity of precipitation from the storm event
    - 5.3.3.1.4 Description of WPC practices and corrective actions taken to manage exceedance of the NAL

#### **5.4 TRAINING – PART 4**

- 5.4.1 Employees must receive initial WPC training before starting work at the jobsite.
- 5.4.2 Contractors' project managers, supervisory personnel, subcontractors, and employees involved in WPC work:
  - 5.4.2.1 Provide stormwater training in the following subjects:
    - 5.4.2.1.1 WPC rules and regulations
    - 5.4.2.1.2 Implementation and maintenance of:
      - 5.4.2.1.2.1 Temporary soil stabilization
      - 5.4.2.1.2.2 Temporary sediment control
      - 5.4.2.1.2.3 Tracking control
      - 5.4.2.1.2.4 Wind erosion control
      - 5.4.2.1.2.5 Material pollution prevention and control
      - 5.4.2.1.2.6 Wastemanagement
      - 5.4.2.1.2.7 Nonstormwater management
  - 5.4.2.2 Conduct weekly training meetings covering:
    - 5.4.2.2.1 Deficiencies and corrective actions for WPC practices
    - 5.4.2.2.2 WPC practices required for work activities during the week
    - 5.4.2.2.3 Spill prevention and control
    - 5.4.2.2.4 Material delivery, storage, usage, and disposal
    - 5.4.2.2.5 Waste management
    - 5.4.2.2.6 Nonstormwater management procedures
- 5.4.3 Training for personnel who collect water quality samples must include:
  - 5.4.3.1 Review of the sampling and analysis plan.
  - 5.4.3.2 Health and safety review
  - 5.4.3.3 Sampling simulationsFile copies of training and sign-in sheets in Appendix I of the SWPPP.

#### **5.5 IMPLEMENTATION – PART 5**

- 5.5.1 Manage work activities to prevent or reduce the discharge of pollutants offsite.
- 5.5.2 Contract to assign a Water Pollution Control Manager (WPC Manager) to implement SWPPP.
  - 5.5.2.1 Qualifications – WPC Manager must be a QSD or QSP.
  - 5.5.2.2 Responsibilities – The WPC Manager must:
    - 5.5.2.2.1 Be the primary contact responsible for WPC work
    - 5.5.2.2.2 Oversee WPC work, including:
      - 5.5.2.2.2.1 Maintenance of WPC practices

## Waterman Gardens - Abatement &amp; Demolition Services

- 5.5.2.2.2 Inspections of WPC practices identified in the SWPPP or WPCP
- 5.5.2.2.4 Inspections and reports for visual monitoring
- 5.5.2.2.5 Preparation and implementation of the REAPs.
- 5.5.2.2.6 Sampling and analysis and preparation and submittal of NAL exceedance reports
- 5.5.2.2.7 Submittal of notice of discharge forms
- 5.5.2.2.3 Oversee and enforce hazardous waste management practices including spill prevention and control measures
- 5.5.2.2.4 Have the authority to:
  - 5.5.2.2.4.1 Mobilize crews to make immediate repairs to WPC practices
  - 5.5.2.2.4.2 Stop construction activities damaging WPC practices or causing water pollution
- 5.5.2.2.5 Ensure that all employees have current WPC training and provide training if collecting water quality samples is delegated
- 5.5.2.2.6 Implement the authorized SWPPP or WPCP
- 5.5.2.2.7 Revise the SWPPP or WPCP if required
- 5.5.2.2.8 Be at the job site within 2 hours of being contacted
- 5.5.3 Rain Gauge
  - 5.5.3.1 Install – Contractor shall install 1 rain gauge on the project site.
    - 5.5.3.1.1 Locate the gauge in an open area away from obstructions such as trees or overhangs.
    - 5.5.3.1.2 Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post.
    - 5.5.3.1.3 Make sure that the top of the gauge is level.
    - 5.5.3.1.4 Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.
  - 5.5.3.2 Read and Record
    - 5.5.3.2.1 The rain gauge(s) shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Follow the rain gauge instructions to obtain accurate measurements.
    - 5.5.3.2.2 Log rain gauge readings on approved form or CASQA form. Submit form to Owner weekly.
    - 5.5.3.2.3 Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset, unless an automated recording rain gauge is used. If automated recording rain gauge is used, follow rain gauge instructions.
- 5.5.4 Sampling and Analysis Plan - See SWPPP Section for sampling locations and sampling plan.
  - 5.5.4.1 This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:
    - 5.5.4.1.1 During dangerous weather conditions such as flooding and electrical storms.
    - 5.5.4.1.2 Outside of scheduled site business hours.
  - 5.5.4.2 The most effective way to avoid sampling and analysis requirements is to avoid the exposure of demolition materials to precipitation and stormwater run-off or run-on. A clean site is critical to limiting exposure.
- 5.5.5 Water Sampling – Collect water samples:
  - 5.5.5.1 During a storm event for:
    - 5.5.5.1.1 Each nonvisible pollutant source and a corresponding uncontaminated control sample
    - 5.5.5.1.2 All locations identified on the REAP.
  - 5.5.5.2 During a qualifying rain event for:

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

- 5.5.5.2.1 Each nonvisible pollutant source and a corresponding uncontaminated control sample
- 5.5.5.2.2 Turbidity, pH, and other constituents as required
- 5.5.5.2.3 All locations identified on the REAP.

Collect at least 3 samples for each day of a qualifying rain event.

Collect samples during (1) normal working hours and (2) the first 2 hours of each storm event.

If a downstream sample shows an increased level of turbidity, pH, or other constituent, assess WPC practices, site conditions, and surrounding influences to determine the probable cause for the increase.

- 5.5.6 Record Keeping – See SWPPP Section 600 for requirements.

**6. ATTACHMENTS – Attached as separate documents (posted)**

<b>Attachment</b>	<b>Attachment Description</b>
A	Instructions to Bidders for Contracts (HUD 5369)
B	Representations, Certifications, and Other Statements of Bidders (HUD 5369A)
C	General Conditions for Construction Contracts (HUD 5370)
D	Statement of Bidder's Qualifications
E	Designation of Subcontractors
F	Certification for Business Concerns Seeking Section 3 Preference
G	Certification of Bidder Regarding Equal Employment Opportunity
H	Certification of Bidder Regarding Minority/Women's Business Enterprise
I	Corporate Certification
J	Minority Code Identification
K	Non-Collusion Affidavit
L	Contractor's Certification of Compliance/Davis Bacon and Related Act Requirements
M	Davis Bacon Wage Determination
N	Supplementary Conditions of the Contractor for Construction (HUD 92554M)
O	Agreement/Acknowledgement Certification
P	Demolition Map
Q	Original Construction Plans
R	City of San Bernardino Demolition Permit Application
S	City of San Bernardino Demo Guidelines
T	City of San Bernardino Safeguards During Construction
U	City of San Bernardino Request for Release of Bond or Refund of Fees
V	City of San Bernardino AQMD Certification
W	City of San Bernardino Construction & Demo Waste Recycling Program Info Sheet
X	City of San Bernardino Roll Off Bin Request Form
Y	City of San Bernardino Construction & Self Haul Permit Application/Cond.
Z	AQMD 1403 Form
AA	Stormwater Pollution Prevention Plan
BB	Asbestos Survey Reports
CC	Sample of Contract
DD	Bid Bond Form
EE	Bid Proposal Form

**ATTACHMENT A**

**Instructions to Bidders for Contracts  
(HUD 5369)**

**(Attached as a separate file)**



**ATTACHMENT B**

**Representations, Certifications, and Other Statements of Bidder  
(HUD 5369A)**

**(Attached as a separate file)**

**ATTACHMENT C**

**General Conditions for Construction Contracts (HUD 5370)**

**(Attached as a separate file)**

**ATTACHMENT D**

**Statement of Bidder's Qualifications**

**(Attached as a separate file)**

**ATTACHMENT E**

**Designation of Subcontractors**

**(Attached as a separate file)**

**ATTACHMENT F**

**Certification for Business Concerns Seeking Section 3 Preference**

**(Attached as a separate file)**

**ATTACHMENT G**

**Certification of Bidder Regarding Equal Employment Opportunity**

**(Attached as a separate file)**

**ATTACHMENT H**

**Certification of Bidder Regarding Minority/Women's Business Enterprise**

**(Attached as a separate file)**

**ATTACHMENT I**

**Corporate Certification**

**(Attached as a separate file)**



**ATTACHMENT J**

**Minority Code Identification**

**(Attached as a separate file)**

**ATTACHMENT K**

**Non-Collusion Affidavit**

**(Attached as a separate file)**

**ATTACHMENT L**

**Contractor's Certification of Compliance/Davis Bacon and Related Act Requirements**

**(Attached as a separate file)**

**ATTACHMENT M**

**DAVIS BACON WAGE DETERMINATION**

**(Attached as a separate file)**

**ATTACHMENT N**

**Supplementary Conditions of the Contractor for Construction  
(HUD 92554M)**

**(Attached as a separate file)**

**ATTACHMENT O**

**Agreement/Acknowledgement Certification**

**(Attached as a separate file)**

**ATTACHMENT P**

**DEMOLITION MAP**

**(Attached as a separate file)**

**ATTACHMENT Q**

**Construction Plans**

**(Attached as a separate file)**



**ATTACHMENT R**

**City of San Bernardino Demolition Requirements  
Permit Application**

**(Attached as a separate file)**

**ATTACHMENT S**

**City of San Bernardino Demo Guidelines**

**(Attached as a separate file)**

**ATTACHMENT T**

**City of San Bernardino Safeguards During Construction**

**(Attached as a separate file)**

**ATTACHMENT U**

**City of San Bernardino Request for  
Release of Bond or Refund of Fees**

**(Attached as a separate file)**

**ATTACHMENT V**

**City of San Bernardino AQMD Certification**

**(Attached as a separate file)**

**ATTACHMENT W**

**City of San Bernardino Construction & Demo Waste Recycling Program**

**Info Sheet**

**(Attached as a separate file)**

**ATTACHMENT X**

**City of San Bernardino Roll Off Bin Request Form**

**(Attached as a separate File)**

**ATTACHMENT Y**

**City of San Bernardino Construction & Self Haul Permit  
Application/Conditions**

**(Attached as a separate file)**



**ATTACHMENT Z**

**AQMD 1403 FORM**

**(Attached as a separate file)**

**ATTACHMENT AA**

**Stormwater Pollution Prevention Plan**

**(Attached as a separate file)**

**ATTACHMENT BB**

**Asbestos & Lead Survey Reports**

**(Attached as a separate file)**

**ATTACHMENTS CC**

**SAMPLE OF CONTRACT**

**(Attached as a separate file)**

**ATTACHMENT DD**

**BID BOND FORM**

**(Attached as a separate file)**

**ATTACHMENT EE**

**PROPOSAL DUE BY:**  
**10:00 a.m. Thursday, March 8, 2018**

**PC1005 BID PROPOSAL FORM - PAGE 1 OF 2**

Housing Authority of the County of San Bernardino  
Procurement & Contracts Department

Materials and/or Services: **Waterman Gardens - Abatement & Demolition Services**

**PC1005 Waterman Gardens Abatement & Demolition**

**Bids Due: Thursday, March 8, 2018 at 10:00 a.m.**

**SEALED Bids must be delivered to 715 E Brier Drive, San Bernardino, CA 92408 by due date and time.**

Vendor Name: \_\_\_\_\_ Contact & Title: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Contractor's License # \_\_\_\_\_ Expiration Date: \_\_\_\_\_

The undersigned hereby agrees to furnish all materials, labor, tools, equipment, apparatus, facilities, and transportation necessary to complete all work in strict conformity with the specifications, the Instructions and Conditions attached hereto, and to execute the contract to the satisfaction of the HACSB, at the following cost(s):

**I. DEMO I - 60 UNITS TOTAL UNIT COST BID BREAKDOWN**

Floor Plan	Quantity	Abatement Price per Apartment	Demolition Price per Apartment	Total Unit Price	Total Price for Floor Plan
1 Bedroom	8	\$	\$	\$	\$
2 Bedroom	36	\$	\$	\$	\$
3 Bedroom	12	\$	\$	\$	\$
4 Bedroom	4	\$	\$	\$	\$
5 Bedroom	0	\$	\$	\$	\$
<b>60</b>		<b>TOTAL PRICE FOR DEMO I 60 UNITS:</b>			\$

**II. DEMO II - 32 UNITS TOTAL UNIT COST BID BREAKDOWN**

Floor Plan	Quantity	Abatement Unit Price	Demolition Unit Price	Total Unit Price	Total Price for Floor Plan
1 Bedroom	6	\$	\$	\$	\$
2 Bedroom	12	\$	\$	\$	\$
3 Bedroom	6	\$	\$	\$	\$
4 Bedroom	2	\$	\$	\$	\$
5 Bedroom	6	\$	\$	\$	\$
<b>32</b>		<b>TOTAL PRICE FOR DEMO II 32 UNITS:</b>			\$

**GRAND TOTAL FOR DEMO I & II** \$

**Demo I & II Grand Total:** \_\_\_\_\_ **Dollars**

**INVITATION FOR BIDS - PAGE 2 OF 2**

BID NO. PC 1005

Housing Authority of the County of San Bernardino  
Procurement & Contracts Department

**III. DEMO III - ADD ALTERNATE #1 \*Not to be included in determination of low bid.**

- **TO BE AWARDED BY UNIT IN MINIMUM BATCHES OF 20 UNITS.**
- **UNIT TYPES NOT TO BE GUARANTEED. UNIT TYPES WILL VARY.**
- **APPROVAL AND AUTHORIZATION OF ADD ALTERNATE IS SUBJECT TO HUD APPROVAL AND AVAILABLE FUNDING.**
- **ADD ALTERNATE PRICING TO BE GOOD FOR A PERIOD OF ONE (1) YEAR FROM THE BID DUE DATE.**
- **IF ADD ALTERNATE #1 IS TO BE AWARDED, IT MUST BE APPROVED AND AWARDED ON OR BEFORE 80% COMPLETION ON DEMO II.**
- **AN ADDITIONAL MOVE-IN IS IN THE EVENT OF CONTRACTOR'S DE-MOBILIZATION ON SITE.**

Floor Plan	Quantity	Abatement Unit Price	Demolition Unit Price	Total Unit Price	Total Price per Floor Plan
Office Bldgs	4	\$	\$	\$	\$
1 Bedroom	2	\$	\$	\$	\$
2 Bedroom	44	\$	\$	\$	\$
3 Bedroom	20	\$	\$	\$	\$
4 Bedroom	0	\$	\$	\$	\$
5 Bedroom	4	\$	\$	\$	\$
<b>77</b>		<b>TOTAL PRICE DEMO III ADD ALTERNATE #1:</b>			<b>\$</b>

**PRICE FOR ADDITIONAL MOVE-IN:**

**Note: If Proposal is greater than \$25,000 the Proposal shall also include a Bid Guarantee as defined in the Contract Documents. ORIGINAL BID BOND MUST BE DELIVERED TO OFFICE AND RECEIVED BY DUE DATE.**

In submitting this Proposal it is understood that the right is reserved by HACSB to reject any and all proposals. If written notice of the acceptance of this Proposal is mailed, telegraphed, faxed or delivered to undersigned within thirty (30) days after the opening thereof, or at any time thereafter before this proposal is withdrawn, the undersigned agrees to a contract in the prescribed form and furnish any required insurance requirements within ten (10) days after the contract is presented to it for signature.

VENDOR'S AUTHORIZED SIGNATURE:

The undersigned hereby certifies that this Proposal is submitted in response to this solicitation.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

**INSTRUCTIONS AND CONDITIONS**

1. **Vendor Registration.** For HACSB to consider Vendor's proposal ("Proposal"), Vendor will need to register with the HACSB. Vendor must submit the vendor application and all required forms available on the HACSB website at [www.hacsb.com](http://www.hacsb.com). Email registration forms to [procurement@hacsb.com](mailto:procurement@hacsb.com). If not yet registered, vendor must submit a vendor application and all required forms with proposal.
2. **Verification.** Vendor should verify bids before submission, as they cannot be withdrawn or corrected after being submitted. Proposal must be signed by a responsible officer or employee of the Vendor's firm. Obligations assumed by such signatures must be fulfilled. This Proposal may, at HACSB's sole discretion, be rejected if is adjudged incomplete, illegible, or conditional. Vendor may submit alternate proposals or explanations on separate sheets. Such alternates will not be considered in determining the low bid, but may be used in negotiations after determination of the low bidder.
3. **Manufacturers.** (If applicable) In the Proposal, Vendor must state brand of manufacturer and model number on each item bid. If bidding manufacturer and model other than that specified, attach specifications sheets for alternate product(s). Use of a brand name as part of specification by HACSB is not intended to restrict competition, but should be considered a point of reference in terms of product quality and design.
4. **Request for Clarification.** Request for clarification or specifications, if any, shall be directed via email to [cnunez@hacsb.com](mailto:cnunez@hacsb.com) or at time of job walk. Interpretations requested which are not covered in the specifications will only be made in writing by HACSB.
5. **Required Proposal Documents.** This Proposal shall include and incorporate by reference all of the documents ("Contract Documents") referenced under Procurement and Contracting Requirement, section 1.3 Required Documents. Also found under [www.hacsb.com/business](http://www.hacsb.com/business), under forms.

**6. INSURANCE REQUIREMENTS**

**Proof of Insurance**, shall not be terminated or expire without thirty (30) days written notice, and are required to be maintained in force until completion of the contract. The Contractor shall require all subcontractors used in the performance of this contract to name HACSB as an additional insured. Following are the standard types and minimum amounts. (see Exhibit 1 for additional details)

- General Liability:** \$1,000,000; per occurrence for bodily injury, personal injury and property damage liability; *HACSB Additional Insured or,*
- Commercial General Liability:** \$3,000,000; combined single limit bodily and property damage liability per occurrence; *HACSB additional named insured.*
- Comprehensive Automobile Liability:** \$1,000,000; combined single limit bodily and property damage liability per occurrence and aggregate; *HACSB Additional Insured.*
- Errors and Omissions Liability:** \$1,000,000; combined single limit bodily and property damage liability per occurrence and \$3,000,000 aggregate or,
- Professional Liability:** \$1,000,000; per occurrence and aggregate.
- Workers' Compensation:** \$1,000,000 per accident for Bodily Injury or Disease.
- Self Insurance Program:** a State Approved program in an amount and form that meets all applicable requirements of the Labor Code of the State of California.
- Environmental Liability:** \$1,000,000; per occurrence and aggregate; *HACSB Additional Insured.*
- Owner's Liability:** 100% of insurable value of the work, Builder's Risk, Extended coverage for Vandalism and Malicious Mischief, if required; *HACSB additional named insured.*
- Fire Insurance with Extended Coverage:** 100% of insurable value of the work; Builder's Risk, Extended coverage including Vandalism and Malicious Mischief, if required; *HACSB Additional Insured.*

Failure to provide proof of insurance or failure to maintain insurance as required in this bid, or by law; are grounds for immediate termination of the contract. In addition, the awarded bidder should be liable for all re-procurement costs and any other remedies under law.

**Indemnification and Insurance Requirements**

- **Indemnification**  
The Contractor agrees to indemnify, defend and hold harmless HACSB and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Contract from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or expenses incurred by HACSB on account of any claim therefore, except where such indemnification is prohibited by law.
- **Additional Named Insured**  
All policies, except for the Workers' Compensation, Errors and Omissions and Professional Liability policies, shall contain additional endorsements naming HACSB and its officers, employees, agents and volunteers as additional named insured with respect to liabilities arising out of the performance of services hereunder.
- **Waiver of Subrogation Rights**  
The Contractor shall require the carriers of the above required coverages to waive all rights of subrogation against HACSB, its officers, employees, agents, volunteers, Contractors and subcontractors.
- **Policies Primary and Non-Contributory**  
All policies required above are to be primary and non-contributory with any insurance or self-insurance programs carried or administered by HACSB.
- **Proof of Coverage**  
The Contractor shall immediately furnish certificates of insurance to HACSB Procurement Department administering the Contract evidencing the insurance coverage, including the endorsements above required, prior to the commencement of performance of



IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

services hereunder, which certificates shall provide that such insurance shall not be terminated or expire without thirty (30) days written notice to the Department. Contractor shall maintain such insurance from the time Contractor commences performance of services hereunder until the completion of such services. Within sixty (60) days of the commencement of this Agreement, the Contractor shall furnish certified copies of the policies and all endorsements.

- **Insurance Review**  
The above insurance requirements are subject to periodic review by HACSB. HACSB's Risk Manager is authorized, but not required, to reduce or waive any of the above insurance requirements whenever the Risk Manager determines that any of the above insurance is not available, is unreasonably priced, or is not needed to protect the interests of HACSB. In addition, if the Risk Manager determines that heretofore, unreasonably priced or unavailable types of insurance coverage or coverage limits become reasonably priced or available, the Risk Manager is authorized but not required, to change the above insurance requirements, to require additional types of insurance coverage or higher coverage limits, provided that any such change is reasonable in light of past claims against HACSB, inflation, or any other item reasonably related to HACSB's risk. Any such reduction or waiver for the entire term of the Agreement and any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. Contractor agrees to execute any such amendment within thirty (30) days of receipt.
7. **Delivery of Proposal.** Proposals received late or at any location of HACSB other than that indicated on the proposal will be deemed non-responsive and will not be considered.
  8. **Compliance with Contract Documents.** Vendor shall comply with all of the Contract Documents in connection with the performance of the work hereunder. In the event of any conflict between this Proposal and the Contract Documents, the Contract Documents shall control.
  9. **Award of Contract.** Bid opening will be officiated and attended by HACSB Contract Administrator at the time and place indicated the Request for Proposal. Identity of the successful bidder may not be determined at bid opening. HACSB reserves the right to obtain opinion of its counsel of legality and sufficiency of bids. The contract will be awarded, if at all, to the lowest responsible bidder within sixty (60) days of the final date of receiving bids and a purchase order will be issued.
  10. **HACSB's Discretion in Awarding Contract.** HACSB recognizes that price is only one of several criteria to be used in judging a product or service, and HACSB is not legally bound to accept the lowest bid. HACSB reserves the right, unless otherwise stated, to accept or reject any or all bids, or any part thereof, either separately or as a whole, or to waive any informality in a bid. HACSB reserves the right to reject, in its sole discretion, any or all bids, or to waive any informality in the bids, and to reject any items there on. HACSB may, at its sole discretion, cancel this Proposal or any part of this Proposal at any time prior to award.
  11. **Time of Performance.** All work and/or deliveries and set up shall be completed and the contract performed within the total number of calendar days stated in the Proposal. Any modification of this time caused by inclusion of any alternate in the contract shall be as stated in such alternate. Total number of calendar days: to be determined relative to each contract awarded.
  12. **Time is of the Essence.** Time of delivery is a part of the consideration and must be stated in definite terms, and must be adhered to.
  13. **Best Efforts.** Vendor shall perform its duties on premises approved by HACSB, during HACSB'S regular work days and normal work hours and warrants that it shall perform its services in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Vendor acknowledges that HACSB has the right to review the services performed by Vendor and may in its reasonable business discretion, reject such services in writing.
  14. **Costs.** Cost of transportation, handling, and/or inspection on deliveries which do not meet specifications shall be the responsibility of the Vendor.
  15. **Subcontractors.** A list of subcontractors will be submitted at the time of bid opening on the form entitled "Designation of Subcontractors" and as required by State Law. The subcontractor shall have demonstrated to HACSB's satisfaction previous experience in each additional division or classification he is listed under other than its primary contracting business. If a subcontractor is licensed and qualified to do more than one division or classification of work as defined by the specifications, it shall be listed under each of these additional divisions or classifications. All contractors shall be listed if their portion of the work is one-half (½) of one percent (1%) or more of the total project bid amount. Within 72 hours after bid opening, the apparent low bidder will be required to submit an additional list which will include all of the following information for the general contractor and each subcontractor listed in the Proposal: (a) complete name (as it appears on State Contractor's License), address and telephone number for each; (b) trade for each; (c) State Contractor's License Number and license classification for each; and (d) expiration date of State Contractor's License (if license is expired or inactive, proof of renewal must be submitted).
  16. **Samples.** Samples of items, when required, shall be furnished at no charge to HACSB; and if not destroyed by tests, will upon request be returned at Vendor's expense.
  17. **Superintendence by Vendor.** Vendor certifies that it shall give its personal superintendence to the work or have a competent superintendent, satisfactory to HACSB and/or the Architect, if any, on the project at all times during progress with full authority to act for Vendor.
  18. **Removal of Debris, Cleaning.** Vendor shall, daily or as directed during the progress of the work on the project, remove and properly dispose of the resultant trash, dirt and debris, and keep the premises reasonably clear.
  19. **Force Majeure.** Neither party shall be held liable for failure or delay of fulfillment if hindered or prevented by fire, strikes, or Acts of God. (Force Majeure)
  20. **Warranty/Guarantee.** Vendor warrants and guarantees that the goods supplied under this Request for Bid and any purchase order resulting from award of same (including all descriptions, specifications and drawings made a part hereof), and such goods will be merchantable, fit for their intended purposes, free from all defects in materials and workmanship and to the extent not manufactured pursuant to detailed designs furnished by HACSB, free from defects in design. HACSB's approval of designs or specifications furnished by Vendor shall not relieve Vendor of its obligations under this warranty. All warranties, including special warranties specified elsewhere herein, shall inure to HACSB, its successors, assigns, customer agencies and users of the goods or services.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

21. **Stipulation of Lien.** Vendor certifies that all work executed under this Proposal will be performed in accordance with terms of any contract awarded to Vendor by this process and there will be no claims of laborers or mechanics for unpaid wages arising out of the performance of said contract. In consideration of the payment under the terms of the contract, Vendor hereby does release HACSB from any and all claims arising from any contract awarded by this process. Vendor shall prepare and submit to HACSB, a written Stipulation of Lien. The Stipulation of Lien shall be recorded in the County Recorder's Office of San Bernardino County, California.
22. **Safety and Accident Prevention:** Vendor certifies that it shall exercise proper precaution at all times for the protection of persons and property. The safety provisions of applicable law, building and construction codes shall be observed, and Contractor shall take or cause to be taken such additional safety and health measures as HACSB may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the State of California Construction Safety Orders (CCR Title 8, Chapter 4, Subchapter 4, as amended) and the "Manual of Accident Prevention in Construction", published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws.
23. **Assignment.** Assignment of the agreement by Vendor to other suppliers/contractors must be approved by the HACSB Inspector.
24. **Modification.** In addition to the provisions regarding modification specified in the Contract Documents, deviations from the specifications and addenda may only be made at the request of HACSB. Vendor shall not use any specification in lieu of those contained in the specifications, without written consent of HACSB. HACSB shall expect a debit or credit during the project for any deviations from specifications and addenda.
25. **Indemnity; Hold Harmless.** Vendor agrees to defend, save, indemnify and hold harmless HACSB and all its officers, employees, and agents, against any and all liabilities, claims, judgments, or demands, including demands arising from injuries or death of persons (Vendor's employees included) and damage to property, arising directly or indirectly out of the performance of the work, the obligations herein undertaken or out of the operations conducted by Vendor including liability of any nature or kind on account of use of any copyright, or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance furnished or used under this Proposal, save and except claims or litigation to the extent arising through the active negligence or willful misconduct of HACSB. Contractor shall reimburse HACSB for any expenditures, including reasonable attorneys' fees, HACSB may incur arising out of any such claim or litigation, and, if requested by HACSB, Contractor shall defend any such suits at the sole cost and expense of Contractor with counsel selected by HACSB.
26. **Lead Paint Prohibition.** Any Vendor awarded a contract for construction or rehabilitation shall comply with 24 CFR Part 35 prohibiting use of lead-based paint. EPA 2008 Lead Rule Firm Certification, Employee Certification required for work in units built prior to 1978.
27. **Equal Employment Opportunity.** Vendor agrees to comply with Executive Orders 11246, 11375, 11625, 12138, 12432, 12250, Title VII of the Civil Rights Act of 1964, the California Fair Employment Practice Act, Equal Opportunity, San Bernardino County Emerging Small Business Enterprise program, and other applicable Federal, State, and County laws, regulations, and policies relating to equal employment and contracting opportunities, including laws and regulations hereafter enacted. The articles covered by this bid must conform with safety orders of OSHA, CALOSHA, and/or NIOSHA, and OSH- POD.
28. **National Labor Relations Board Certification.** Vendor swears under penalty of perjury that no more than one final, unappealable finding of contempt of court by a federal court has been issued against Vendor within the immediately preceding two-year period because of Vendor's failure to comply with an order of the National Labor Relations Board. This provision is required by, and shall be construed in accordance with, Public Contract Code Section 10296.
29. **California Prevailing Wage (If Price Is Less Than \$2,000).** In the event the Proposal is less than \$2,000, Vendor agrees to comply with all prevailing rate requirements of the California Labor Code. HACSB shall have the right to audit and inspect Vendor's books and records, and interview Vendor's employees, contractors and subcontractors, all according to the same provisions set forth in Section 26 above.
30. **Compliance with Davis-Bacon Act.** Unless otherwise indicated in the quotations, Vendors of HACSB are required, pursuant to 24 CFR 85.36(h)(5), to pay Davis-Bacon prevailing wage rates for all "construction contracts and all related subcontracts in excess of \$2000," which means, for such jobs, the wage rates paid must be equal to or exceed the listed applicable Davis- Bacon wage rate (it also means that the Vendor may be subject to completing certain reports and to audits by the HACSB and HUD staff). <http://www.wdol.gov/>.
31. **Labor Laws.** Vendor agrees to pay the required prevailing wages in accordance with the State Labor Code. Compliance with the prevailing rates of wages and apprenticeship employment standards established by the State Department of Industrial Relations. Contractor agrees to register with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. Contractor and all of Contractor's subcontractors, if any, agrees to pay each employee engaged in all applicable trades or occupation not less than the prevailing hourly wage rate for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work, in accordance with the provisions of Section 1770 of California Labor Code.
32. **Worker's Compensation Insurance.** Vendors making delivery of goods or providing services on HACSB premises shall carry liability insurance and Worker's Compensation coverage in accordance with the Housing Authority's Standard Practice requirements.
33. **No Conflicts.** Vendor certifies that no HACSB employee, whose position in the HACSB service enables them to influence any award of your offer or any competing offer, shall have any direct or indirect financial interest in any transaction resulting from this Request for Bid.
34. **Covenant Against Gratuities.** Vendor shall not offer, either directly or through an intermediary, any improper consideration such as, but not limited to; cash, discounts, service, the provision of travel or entertainment, or any items of value to any officer, employee or agent of the HACSB in an attempt to secure favorable treatment regarding the award of this bid. Vendor shall immediately report any attempt by a Housing Authority officer, employee or agent to solicit, either directly or through an intermediary, improper consideration from Vendor. The report shall be made to the supervisor or manager charged with the supervision of the employee or to the HACSB.
35. **Collusion.** Vendor, by submitting a proposal, hereby certifies that no officer, agent, or employee of the HACSB has a pecuniary interest in this Proposal; that the Proposal is made in good faith without fraud, collusion, or connection of any kind with any other vendor; and that the Vendor is competing solely in its own behalf without connection with, or obligation to any undisclosed person or company.
36. **Drug Free Workplace Certification.** Vendor certifies it is in compliance with the Drug-Free Workplace Act of 1990 and has actions in place in accordance with Government Code Section 8355.

IFB PC1005  
Waterman Gardens - Abatement & Demolition Services

37. **This Request for Proposal is not an order. This request is a solicitation only, and is not intended or to be construed as an offer to enter into any contract or other agreement. No acquisition can be made from this Proposal without a purchase order issued by the HACSB.**
38. **Nondisclosure of Proposal.** There will be no public opening or reading of this Proposal.
39. **Valid Price.** Vendor certifies that the prices quoted in this Proposal do not exceed existing selling prices to other customers for the same or substantially similar items or services for comparable quantities under similar terms and conditions.
40. **Licenses.** Vendor shall ensure that it has all necessary licenses and permits required by the laws of Federal, State, County and municipal laws, ordinances, rules and regulations. Vendor shall maintain these licenses and permits in effect for the duration of this project. Vendor will notify HACSB immediately of loss or suspension of any such licenses and permits. Failure to maintain a required license or permit may result in immediate termination of this contract.
41. **Default by Vendor.** In case of default by Vendor, HACSB may procure the product(s) or service from other sources and may deduct the unpaid balance due Vendor, or may collect against the bond of surety, or may bill Vendor for excess costs so paid. Prices paid by the HACSB shall be considered the prevailing market prices paid at the time such purchase is made.
42. **Disputes.** In the event a dispute arises concerning the bid process or award of the bid, the party wishing resolution of the dispute shall submit a request in writing to the Procurement & Contracts Manager. Vendor may appeal the recommended award or denial of award, providing the following stipulations are met:
  - a. Appeal must be in writing.
  - b. Must be submitted within ten (10) calendar days of the bid due date.

An appeal of a denial of award can only be brought on the following grounds:

- a. Failure of HACSB to follow the selection procedures and adhere to requirements specified in the Request for Bid or any addenda or amendments.
- b. There has been a violation of conflict of interest as provided by California Government Code Section 87100 et seq.
- c. A violation of State or Federal law.

Appeals will not be accepted for any other reasons than those stated above. All appeals must be sent to:

**Angie Lardapide, Procurement & Contracts Supervisor**  
**Housing Authority of the County of San Bernardino**  
**715 E. Brier Drive**  
**San Bernardino, CA 92408**