INVITATION FOR BIDS

City of Santa Rosa

FOR CONSTRUCTING

HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976

CONTRACT NUMBER

C02460

ISSUED BY

CAPITAL PROJECTS ENGINEERING DIVISION

CITY OF SANTA ROSA, CALIFORNIA

2023

Last Updated: March 1, 2016

A T T E N T I O N
Prebid Conference
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City of Santa Rosa

STATE OF CALIFORNIA

INVITATION FOR BIDS

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CONTRACT

FOR

HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976

Contract No. C02460

HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976

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CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➢	For technical questions regarding this project, contact Kevin Oss at (707) 235-6702.
➢	For direct access to plans, specifications and planholders' lists, go to www.srcity.org/bids and click on Bid/Proposal Opportunities.
➢	For direct access to bid results, go to www.srcity.org/bids. Under Link to Capital Projects, click on Capital Projects Contracts.

- IMPORTANT – REVISED BIDDING PROCEDURES

All bids shall be submitted and opened according to the following procedure:

Bid Acceptance Deadline

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 3:00 p.m., December 13, 2023, for Hearn Ave Abatement and Demolition, Contract No. C02460. (Engineer's Estimate: $295,000.00).

Bids tendered after this deadline will not be accepted. The official time clock for accepting bids will be an electric date and time stamping clock, located in the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California. In order to be accepted, bids must be received prior to 3:00 p.m. Therefore, a bid stamped in at 2:59 p.m. will be accepted, but one delivered at or after 3:00 p.m. is late and will not be accepted.

Bid Opening

Prospective bidders, subcontractors, and materials suppliers are invited to attend the Bid opening via Zoom video/teleconference or in person at 69 Stony Circle, Santa Rosa, California. The bid opening is scheduled to be held at 3:00 pm, December 13, 2023.

The teleconference can be accessed at:
https://srcity-org.zoom.us/j/8630632770
Phone: 1 669 219 2599
Meeting ID:863 063 2770
Find your local number: https://srcity-org.zoom.us/u/kctM1eJRT6

Project Description/Scope of Work

This project includes the demolition, abatement, off haul, and disposal of hazardous materials from the existing structures located at 1004, 980, and 976 Hearn Avenue. This will prepare the site for the future development of a "hub" which will include a fire station, community/cultural center, and a public library, as well as provide for the extension of Dutton Avenue.

Mandatory Pre-Bid Meeting

Prospective bidders are required to attend a mandatory pre-bid meeting in person at the frontage of 980 Hearn Ave, Santa Rosa, California. The pre-bid meeting is scheduled to be held at 2 p.m., November 30, 2023.

Subcontractor Information; Department of Industrial Relations Registration

Bidders shall provide the names, business addresses and license numbers of all subcontractors listed on bidder's List of Subcontractors. No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

CITY OF SANTA ROSA

C02460 HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976

ESTIMATED QUANTITIES

Contract #: **C02336**

Project Title: **HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976**

Line #	Description	Unit	Quantity
1	HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976	LS	1

The foregoing quantities are approximate only, being given as a basis for the comparison of bids, and the City of Santa Rosa does not expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, as may be deemed necessary or expedient by the Engineer.

Bids shall be made in accordance with the prevailing hourly rate of per diem wages for this locality and project as determined by the Director of the DIR pursuant to Labor Code sections 1770 *et seq*.

Contractor shall be responsible for compliance with the Immigration Reform Control Act of 1986.

If the project requires the employment of workers in any apprenticeable craft or trade, once awarded, Contractor and subcontractors must apply to the Joint Apprenticeship Council unless already covered by local apprentice standards (see Labor Code section 1777.5).

All bids are to be compared on the basis of the Engineer's estimate of the quantities of work to be performed. No bid will be awarded to a contractor who is not licensed in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code. Contractor must hold **Class C-21 and C-22** licensing for this project.

Project plans, bid and contract forms for C02460 - Hearn Ave Abatement and Demolition - 1004, 980, 976 may be obtained through PlanetBids at www.srcity.org/bids. These documents can no longer be obtained at the Transportation and Public Works Department.

No bid will be accepted unless it is made on the contract bid forms furnished by the Transportation and Public Works Department through PlanetBids. The original of the completed bid forms bearing original signatures must be submitted. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

The successful bidder will be required to hold a current City of Santa Rosa business tax certificate issued pursuant to Chapter 6.04 of the Santa Rosa City Code before commencing work on this project. For information regarding the business tax, contact Revenue and Collections at (707) 543-3170.

For any moneys earned by Contractor and withheld by the City of Santa Rosa to ensure the performance of the Contract, Contractor may, at its request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the California Public Contract Code.

The City of Santa Rosa reserves the right to reject any or all bids and the right to waive minor irregularities or informalities in any bid or bonds.

Lisa Welsh
Lisa Welsh (Nov 16, 2023 14:55 PST)

LISA WELSH
Supervising Engineer

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

1 GENERAL

The work described herein shall be done in accordance with the "Contract Documents," which are the:

1. Special Provisions
2. Project Plans, consisting of 5 sheets entitled Hearn Ave Abatement and Demolition – 1004, 980, 976, City File No. 2023-0032
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

In the event of a conflict in any of these documents, the order of precedence shall be determined by Section 5-1.02 of these Special Provisions.

Whenever the Standard Specifications use the terms State of California, Department of Transportation, Director, Engineer, or Laboratory, the following terms shall be substituted therefor, and any reference to any of the foregoing terms shall be understood and interpreted to mean and refer to such substituted terms as follows:

For State of California - the City of Santa Rosa;

For Department - the City of Santa Rosa Department of Transportation and Public Works or the City of Santa Rosa Water Department;

For Director - the City Engineer of the City of Santa Rosa;

For Engineer - the City Engineer of the City of Santa Rosa or the City Engineer's authorized agents;

For Laboratory – Materials Engineering of the City of Santa Rosa Transportation and Public Works Department, or such other laboratory as may be authorized by the City.

Unless otherwise provided, whenever in these Special Provisions attention is directed to specific provisions in the Standard Specifications, such direction shall not be interpreted as excluding other applicable provisions of the Standard Specifications.

Unless otherwise provided, when sections and subsections of the Standard Specifications are used in these Special Provisions, such use is not exclusive and shall not be interpreted as excluding other applicable provisions of said sections and subsections but is only intended to add to or modify such sections or subsections.

Unless otherwise provided, full compensation for compliance with these Special Provisions is included in the contract price and no additional allowance will be made to Contractor therefor.
The Standard Specifications are hereby modified to delete any reference or incorporation of provisions providing for or requiring arbitration of any and all claims and disputes arising under this contract.

2 BIDDING

2-1.06 Bid Documents: Prospective bidders will be furnished with an Invitation for Bids which will state the location and description of the contemplated public works project and will show the approximate estimate of the various quantities and kinds of work to be performed and materials to be furnished with a schedule of items for which unit prices are requested.

2-1.07 Approximate Estimate: The quantities given in the Contract Documents are approximate only, being given as a basis for the comparison of bids, and the City does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or part of the work or to omit parts of the work, as may be deemed necessary or advisable by the Engineer.

2-1.31 Examination of Project Plans, Specifications, City Standards, Invitation for Bids and Work Site: Prior to submitting a bid, the bidder shall carefully examine the Project Plans, Invitation for Bids, City Standards and the proposed work site. If any person contemplating submitting a bid for this public works project is in doubt as to the meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the Contract Documents, he or she may submit a written request for interpretation or correction to the Engineer. The written request must be received by the Engineer a minimum of **96** hours prior to bid opening. Any interpretation or correction of the Contract Documents prior to bid opening will be made only by written addendum issued by the City. A copy of such addendum will be mailed or faxed to each Planholder. The City will not be bound by any other explanations or interpretations of the Contract Documents.

2-1.33 Bid Document Completion: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

2-1.33A Bid Forms: All bids shall be made on bid forms obtained from PlanetBids at www.srcity.org/bids. The bidder shall submit its bid on the original bid forms furnished by the City. Bids submitted on forms other than the forms furnished to the bidder by the City will not be considered.

The bid forms to be submitted at the time of and with the bid are:

1. Unit Price Schedule
2. List of Subcontractors
3. List of Previous Similar Jobs
4. Noncollusion Declaration
5. Bid Guaranty Information and Bidder's Information and Signature
6. Bid Guaranty (Bid Bond or alternate security)

All bids shall give the proposed prices and must bear the original signature of the bidder. Bidders shall fill in all blanks on the bid forms where required. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

2-1.33B Registration with DIR: No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

2-1.33C Subcontractors: The Subletting and Subcontracting Fair Practices Act, Public Contract Code sections 4100-4113, inclusive (the "Act") shall apply to all subcontracts in excess of one-half of one percent of the total amount of a bid. The Act requires subcontractors, if used for such work, to be listed in the contractor's bid and prohibits the substitution of subcontractors, except as authorized by the Act. Each bidder shall, with respect to the work of any subcontractor in excess of one-half of one percent of the total amount of the bid, include as part of the bid on the bid form provided:

1. The name, business address and DIR registration number of each subcontractor who will perform work or labor or render services to the Contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Project Plans or other Contract Documents in an amount in excess of one-half of one percent of the Contractor's total bid; and

2. The portion of the work that will be done by each subcontractor. Only one subcontractor shall be listed for each portion.

The purchase of sand, gravel, crushed rock, batched concrete, aggregate, ready-mixed concrete, and/or any other materials produced and furnished by established and recognized commercial plants, together with the delivery of such materials to the work site by the source of the materials or by recognized commercial hauling companies, is not considered as subcontracting under this section.

2-1.33E Rejection of Bids Containing Alterations, Erasures or Irregularities: Bids may be rejected if they show any alterations of forms, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind.

2-1.34 Bid Guaranty: All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check, or by a bidder's bond made payable to the City of Santa Rosa and executed as surety by a corporate surety authorized and admitted to transact a surety business in the State of California in an amount equal to ten percent of the amount of the bid. No bid shall be considered unless such cash, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

2-1.40 Withdrawal of Bid: A bid may be withdrawn prior to, but not after, the hour fixed in the public notice for the opening of bids, provided that a written request to withdraw the bid, executed by the bidder or the bidder's authorized representative, is filed with the Engineer before this deadline. The withdrawal of a bid shall not prejudice the right of a bidder to submit a new bid.

2-1.43 Public Opening of Bids: Bids will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.

2-1.46 Disqualification of Bidders: Serial bids from the same bidder will not be accepted. This section shall not be interpreted to mean that the same contractor may not be the contractor in one bid and listed as a subcontractor in another bid, provided that no collusion exists.

2-1.48 Competency of Bidders: No bid will be accepted from or contract awarded to a contractor that is not licensed in accordance with the law, that does not hold a license qualifying it to perform work under this contract, to whom a bid form has not been issued by the Engineer, or that has not successfully completed projects of similar character, scope and cost to the proposed project. Bidders will be required to provide a list of previous similar jobs with their bids.

3 CONTRACT AWARD AND EXECUTION

3-1.04 Contract Award: The City reserves the right to reject any or all bids. Bids are required for the entire work described herein. All bids will be compared with the Engineer's estimate of the quantities of work to be completed. Contract award, if any, will be made to the lowest responsible bidder within sixty days from the date bids are opened.

3-1.05 Contract Bonds:

The successful bidder will NOT be required to furnish a performance bond or material guaranty bond for this project. In the event that the contract award exceeds $25,000.00, the successful bidder will be required to provide a payment bond for labor and materials within ten days after receipt of the Notice of Award in accordance with California Civil Code section 9550, executed in a sum of 100% of the Contract price. **A BID BOND IS REQUIRED. REFER TO SECTION 2-1.34 OF THESE SPECIAL PROVISIONS.**

The bond(s) shall be provided in a form acceptable to the City and issued by a corporate surety in good financial standing and authorized and admitted to transact a surety business in the state of California for the purposes and in the amount(s) stated above.

Whenever the financial or legal status of any surety on any such bond(s) is/are unacceptable to the City, it may make a demand to Contractor for further bond(s) or additional surety, not exceeding the sums originally required. Thereafter, no payment shall be made upon the Contract to Contractor or any assignees of Contractor until such bond(s) or additional surety has/have been provided to the City.

3-1.07 Indemnification and Insurance: Indemnification: Contractor shall defend, hold harmless and indemnify City, its officers, agents and employees, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably incurred by City's staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death; damage to personal, real or intellectual property or the environment; contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with the performance of or the failure to perform the Contract by Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not such Liabilities are caused in part by a party indemnified hereunder, or such Liabilities are litigated, settled or reduced to judgment; provided, that the foregoing indemnity does not apply to liability for any damage or expense for death or bodily injury to persons or damage to property to the extent arising from (i) the sole negligence, or willful misconduct of, or defects in design furnished by City, its agents, servants, or independent contractors who are directly responsible to City (excluding Contractor), or (ii) the active negligence of City.

The existence of any of the insurance policies or coverages described in this Contract shall not affect or limit any of City's rights hereunder, nor shall the limits of such insurance limit Contractor's liability to the City hereunder. The provisions of this section shall survive any expiration or termination of the Contract.

Insurance: Contractor shall maintain in full force and effect all of the insurance coverage described in and in accordance with the insurance requirements set forth below. Maintenance of such insurance coverage during the entire performance of the Contract is a material element of the Contract. Failure by Contractor to (i) maintain or renew coverage, (ii) provide notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, if necessary, may be deemed a material breach of the Contract by Contractor, whereas the City

shall be entitled to all rights and remedies at law or in equity. Notwithstanding the foregoing, any failure by Contractor to maintain required insurance coverage shall not excuse or alleviate Contractor from any of its other duties or obligations under the Contract. In the event Contractor retains or utilizes any subcontractors or sub-consultants in performance of the work, Contractor shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverage requirements herein set forth below.

Insurance Requirements:

A. Insurance Policies: Contractor shall maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with an AM Best rating of no less than A-:VI or a rating otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	$ 3 million per occurrence $ 3 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include products liability and completed operations coverage which shall continue for a period of 365 days after acceptance of the work by the City. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. Coverage may be met by a combination of primary and umbrella or excess insurance, but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as ISO Form CG 20 10, 11 85 or both CG 20 10 and CG 23 37 forms if later revisions used). Coverage shall not exclude subsidence.
2.	Business auto coverage	$ 1 million	ISO Form Number CA 00 01 covering any auto (Code 1). Insurance shall cover owned, non-owned and hired autos.
3.	Workers' compensation and Employer's Liability	$ 1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than $1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.
4.	Contractor's pollution legal liability and/or asbestos legal liability and/or errors	$ 1 million per occurrence or claim $ 1 million aggregate	If the work involves lead-based paint or asbestos identification/remediation, the pollution liability policy must not contain lead-based paint or asbestos exclusions. If the work involves mold identification, the pollution liability policy must not contain a mold exclusion and a definition of "Pollution" in said policy shall include microbial matter including mold.

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled by either party, except after prior written notice has been provided to the City in accordance with the policy provisions.
2. Liability policies shall provide or be endorsed to provide the following:
    a. For any claims related to this Contract, Contractor's insurance coverage shall be primary, and any insurance or self-insurance maintained by City shall be in excess of Contractor's insurance and shall not contribute with it. Endorsements at least as broad as 20 01 04 13 or evidence of policy language will be required in non-ISO CGL policies.
    b. The City of Santa Rosa, its officers, agents and employees are to be covered as additional insureds on the CGL policy. Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.

C. Verification of Coverage and Certificates of Insurance: Contractor shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Contract. The City reserves the right to require complete copies of all required policies and endorsements during the duration of the Contract and for a period of 365 days following City's acceptance of the work.

D. Other Insurance Provisions:

1. No policy required by this Contract shall prohibit Contractor from waiving any right of recovery prior to loss. Contractor hereby waives such right with regard to the indemnitees.
2. All insurance coverage amounts provided by Contractor and available or applicable to this Agreement are intended to apply to the full extent of the policies. Nothing contained in this Agreement limits the application of such insurance coverage. Coverage for an additional insured shall NOT be limited to the insured's vicarious liability. Defense costs must be paid in addition to coverage amounts.
3. Self-insured retentions above $10,000 must be approved by the City. At the City's option, Contractor may be required to provide financial guarantees.
4. City reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

3-1.18 Contract Execution: The fully executed Contract, original bonds and insurance certificates and endorsements required under the Contract shall be delivered to the City within ten calendar days of Contractor's receipt of the Notice of Award.

The Engineer will supply Contractor with up to ten sets of the Invitation for Bids and Project Plans. At least one complete set of the Invitation for Bids and Project Plans shall be kept at the construction site in good condition and made available to the Engineer at all times. Additional copies of the Invitation for Bids and Project Plans will be provided by the Engineer at Contractor's cost.

3-1.20 Failure to Execute Contract: Contractor's failure to deliver to the City the fully executed Contract within ten calendar days of Contractor's receipt of the Notice of Award shall be cause for the cancellation of the award and the forfeiture of the bid guaranty to the City. If the successful bidder refuses or fails to execute the Contract, the City may award the Contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible bidder. The refusal or failure by the second or third lowest responsible bidder to deliver to the City the fully executed Contract within ten calendar days of receipt of the Notice of Award to the respective bidder shall likewise be cause for the cancellation of the award and the forfeiture of the bid guaranty of the

respective bidder. In its discretion, the City may then re-advertise the project or construct it by day labor.

3-1.21 Return of Bid Guarantees: Within ten days after the opening of bids, the City will return the bid guarantees to all bidders except the three lowest responsible bidders. The bid guarantees of the three lowest responsible bidders will be retained until the Contract has been fully executed. In the event all bids are rejected, all bid guarantees will be returned to the respective bidders.

3-1.22 Subcontractors: The successful bidder shall furnish a list of all subcontractors as required under Sections 2-1.33C. The list shall include the name, business address, DIR registration number and the state contractor's license number of each subcontractor on the list and the names of the responsible managing employees whose names appear on the subcontractors' licenses.

4 SCOPE OF WORK

4-1.05 Changes and Extra Work: All changes to the Contract shall be made by written change order only.

All extra work shall be recorded by Contractor on a daily report signed by both the City and Contractor. The "daily reports" shall thereafter be considered the true record of extra work performed. A copy of the daily reports will be furnished to Contractor. Contractor is directed to Section 9-1.04 of this Invitation for Bids.

4-1.05C Compensation for Altered Quantities: Payment and compensation for altered quantities shall conform to the provisions of Section 9-1.06 of the Standard Specifications, except as modified herein.

5 CONTROL OF WORK

5-1.02 Contractor's Copies of Contract Documents: In the event of a conflict in any of the Contract Documents, the order of precedence from highest to lowest shall be as follows:

1. Special Provisions
2. Project Plans, consisting of 5 sheets entitled Hearn Ave Abatement and Demolition 1004, 980, 976, City File No.2023-0032.
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

5-1.05 Order of Work: The work as shown on the Project Plans and as specified in the Invitation for Bids shall be constructed in a sequence that is satisfactory to and approved by the Engineer.

Contractor shall prepare a work schedule per Section 8-1.02 of the Standard Specifications.

With the exception of trenching, all existing street, street light base, curb and gutter, storm drain, water line, and sewer line work shall be completed before any existing street paving is removed.

Full compensation for the conformance to the requirements of this section is included in the Contract price and no additional allowance will be made to Contractor for this work.

5-1.17 Character of Workers: Contractor is directed to Section 5-1.17 of the Standard Specifications which states:

> "If any subcontractor or person employed by the Contractor shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the request of the Engineer, and such person shall not again be employed on the work."

No additional compensation shall be granted to Contractor in the event City exercises any part of its rights under this section and any and all costs related to such exercise shall be borne by Contractor.

5-1.20 Cooperation with Other Entities: Attention is directed to Section 5-1.20 of the Standard Specifications.

Other construction including but not limited to utility, power, and pipe line relocation, may be in progress by other forces within and adjacent to the project area at the same time work is being performed under this Contract by Contractor.

Contractor shall cooperate with the forces performing other work, to the end that such forces may conduct their operations with as little inconvenience and delay as possible. Contractor shall grant such forces access to the project area as is reasonable and necessary to transport materials and equipment to the site of operations by the other forces.

5-1.20B(4)(a) Offsite Staging Areas and Construction Yards: Attention is directed to Santa Rosa City Code section 20-52.040, Temporary Use Permit.

A Temporary Use Permit shall be obtained for any offsite construction yard on private property to be used for any of the following:

a. Stockpiling of equipment and/or materials;
b. Staging of construction;

c. Placement of work trailers or mobile offices;
d. Storage of trench spoils; or
e. Other construction related activities not specifically enumerated above.

5-1.26 Lines and Grades: Contractor shall carefully preserve all bench marks, grade stakes, and all other survey markers. In the case of willful or careless destruction, Contractor shall bear the cost of replacing the markers.

Contractor shall contact the Engineer directly for coordination of survey staking. Written staking requests must be submitted at least two working days in advance of the date and time stakes are needed.

5-1.27B Examination and Audit: Pursuant to California Government Code section 8546.7, any contract with the City involving expenditures in excess of $10,000 shall be subject to the examination and audit of the California State Auditor for a period of three years after final payment is made to Contractor by City under this Contract. Any such examination and audit will be confined to those matters connected with the performance of this Contract.

5-1.30A Inspection: Contractor shall bear all costs associated with the re-inspection of any defective, rejected or unauthorized work as determined by the Engineer in Engineer's sole discretion. Such costs of re-inspection, including any costs incurred by the City for additional staff time or fees for third-party consultant inspectors, will be deducted from one or more progress payments hereunder.

5-1.36A Property and Facility Preservation: Attention is directed to Section 5-1.36 of the Standard Specifications.

At Contractor's sole expense, all fences, gates, landscaping, drainage ditches, sidewalks, irrigation systems, and any other improvements that are damaged, removed or destroyed because of Contractor's operations, shall be replaced in accordance with City Standards at a minimum and restored to the same or better condition. Concrete surface treatment and score marks shall match adjacent existing concrete improvements.

5-1.36E Obstructions: Attention is directed to Section 5-1.36 of the Standard Specifications and to the possible existence of underground gas mains, high voltage lines, telephone ducts, storm drains and water and sewers systems, the locations of which are not shown on the Project Plans. The determination of the location of these facilities and the cost of repair or replacement in the event of damage to such facilities are the sole responsibility of Contractor.

Should Contractor alter any public utility or private improvements to facilitate its operations or for its sole benefit, which alteration would not be otherwise required, Contractor shall make whatever arrangements are necessary with the owner or controlling authorities and shall bear all expenses in connection therewith. Any damages to any public utility or private improvement caused by Contractor shall be repaired by Contractor at its sole expense and to the full satisfaction of the Engineer or the controlling authority.

Any subsurface information and data furnished under any part of this Contract are not intended as a representation or warranty but are furnished for information only. It is expressly understood that the City will not be responsible for the accuracy thereof or for any deduction, interpretation or conclusion drawn therefrom by Contractor. The information is made available so that Contractor may have ready access to the same information available to the City and is not part of this Contract.

PRIOR TO STARTING ANY EXCAVATION, CONTRACTOR SHALL (AT LEAST TWO WORKING DAYS IN ADVANCE) CALL UNDERGROUND SERVICE ALERT (USA) toll free at (800) 227-2600 and provide USA with all necessary data relative to the proposed excavation. USA will accept calls and process information to participating agencies who have underground facilities in the area

between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m., calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours, and on Saturdays, Sundays and holidays, Contractor shall contact the owner of the affected facility.

Contractor shall coordinate all work with the appropriate City field personnel. When City work forces are required at the job site to perform Contract items of work, Contractor shall give a minimum of two working days advanced notification to the appropriate field office:

Water Division:	(707) 543-4200
Sewer Division:	(707) 543-4200
Street Division:	(707) 543-3880
Survey Division:	(707) 543-3834

5-1.43 Potential Claims and Dispute Resolution: "Claim" means a separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City under the Contract; (B) Payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; or (C) Payment of an amount that is disputed by the City.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed, provided, the parties may extend the 45 day time period by mutual agreement.

If the City needs approval from the City Council to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the Claim, and the Council does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim, the City shall have up to three days following the next duly publicly noticed meeting of the City Council after the 45-day period, or extension expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion.

Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, the Claim shall be deemed rejected in its entirety.

If a Contractor disputes the City's written response, or if the City fails to respond to a Claim within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall conduct a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the Claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

6 CONTROL OF MATERIALS

6-2.01 Source of Supply and Quality of Materials: All materials required to complete the work under the Contract shall be furnished by Contractor and shall be free of hazardous substances.

6-3.01 General: Statistical means will not be used by the City for determination of Standard Specification compliance. Whenever both operating range test results and Contract compliance requirements are specified in these special provisions, the operating range requirements shall apply to the individual test results.

6-3.01A Material Submittals: Upon award of the Contract by City, Contractor shall submit to the Engineer a list of all materials proposed to be used on this project and any supporting documentation and/or samples required and source of supply.

For material listed on the "Engineer's List of Approved Items" which is located in the Sewer and Water sections only of the City Standards, the Engineer shall be provided with the name of the manufacturer and model/part number for all material proposed for this project, unless that item has been replaced as shown on the Project Plans or in the Invitation for Bids.

For all other materials used on this project, regardless of the type of work, Contractor shall provide to the Engineer the name of the manufacturer and model/part number along with supporting documentation and/or samples that will allow the Engineer to determine the material's acceptability.

The Engineer reserves the right to reject any proposed material, whether on the City's "Engineer's List of Approved Items" or not. If the City obtains information indicating that a listed item is not performing satisfactorily or is found to be defective, that item will be rejected and Contractor shall submit a replacement for review at no additional cost to the City.

6-3.01B Material Guarantee: Before any contract is awarded, the bidder may be required to furnish samples of materials and detailed descriptions of equipment to be used in the construction of the project. The materials samples may be subjected to the tests provided for in the Standard Specifications or in this Invitation for Bids to determine their quality and fitness for the project. The successful bidder shall unconditionally guarantee project materials and workmanship for a period of one year from the date of recording of the Notice of Completion. The guarantee shall cover 100% of all costs of repairs within the one year period, including all costs of labor, materials, equipment, and incidentals. Except as may be otherwise provided in Section 3-1.05, the successful bidder shall provide a surety bond executed by a corporate surety authorized and admitted to transact a surety business in the state of California in the minimum amount of one-half of the Contract price to cover this guarantee.

6-3.05 Quality Assurance: California Test 216 (Relative Compaction) testing will be modified as follows: A mechanical compactor (Ploog Engineering Co. Model M 100 or equivalent) with 10-pound hammer and split compaction molds shall be used in lieu of the specified manual compaction equipment.

California Test 231 (Nuclear Gage Determination of In-Place Density) will be modified as follows: In-place density and relative compaction may be determined on the basis of individual test sites in lieu of the area concept, at the discretion of the Engineer.

6-4 Water Utility

6-4.01A Construction Water: All water required for the performance of the work shall be provided by Contractor. Prior to obtaining water from the City's water system, Contractor shall obtain a Water Use Permit from the City of Santa Rosa Water Department and rent a hydrant or bridge meter. Contractor is responsible for the cost of all water and the cost of all deposits, permits and fees.

Contractor is prohibited from operating gate valves or fire hydrants on the City system.

The acquisition of water from the City's water system through un-metered hydrants or other facilities is a violation of City ordinance and State law. The use of water from sources other than the City's water system must be approved by the Engineer in advance of the use.

Citations and fines will be levied for violation of these and other utility regulations and deductions will be made from payments consistent with Section 7-1.02A(1) of the Standard Specifications.

6-4.01B Water Utility Notification: Contractors or parties requiring work of any kind by the City of Santa Rosa Water Department forces shall request such services a minimum of 48 hours in advance of the time such services are desired. Work requests which will involve the City of Santa Rosa Water Department forces for more than eight hours or an extensive number of City parts shall be requested a minimum of seven calendar days in advance.

If it is necessary to terminate or disrupt utility service to any customer, Contractor shall make the request for such work by City forces an additional 72 hours (three additional working days for a total of five working days advance notice) in advance of the time such services are desired to allow affected customers a minimum of 72 hours' notice. Contractors who fail to keep field appointments will be billed for scheduled City of Santa Rosa Water Department crew standby time which was used and the Contractor shall bear the costs incurred by the City of Santa Rosa's Water Department for re-notification of customers.

City of Santa Rosa Water Department crews work a 9/80 schedule. This schedule may prohibit shutdowns for tie-ins on alternating Fridays. After hours work or weekend work may be performed if prior authorization from the Engineer is obtained.

Other than the hours specified in this Invitation for Bids, requests by Contractor for after hours or weekend work is to be avoided whenever possible. Any overtime costs incurred by City for such work shall be borne by Contractor.

Interruption of utilities service to commercial customers shall be coordinated with the customer to minimize disruption to the enterprise to the greatest extent practicable. After notification by the Contractor of the need, the City of Santa Rosa Water Department will contact all commercial customers and inform Contractor accordingly.

6-4.01C Water Facility Damage: All damage caused to the City's water system shall be immediately reported to the Engineer.

Damage caused to the City's water system by Contractor's operations shall be repaired by the Contractor at Contractor's sole expense in a manner satisfactory to the City of Santa Rosa Water Department. Such repairs shall not be charged to the City or any City project. All repair work shall be witnessed and approved by the City of Santa Rosa Water Department prior to backfilling the excavation. The City will require re-excavation if backfilling occurs prior to inspection, which costs shall be borne by Contractor.

Contractor is responsible for, at its sole cost and expense, the repair and remediation of damage to property and facilities caused by any of the following circumstances:

a. Contractor fails to make a written request for a markout or begins excavation without providing the City of Santa Rosa Water Department a reasonable opportunity to mark facilities;
b. Contractor destroys markouts;
c. Contractor fails to perform hand digging or probing for utilities near markouts; or
d. Contractor fails to use reasonable caution, regardless of whether markouts are present or clear. Reasonable caution includes any efforts to avoid damaging existing facilities, such as when excavating in the vicinity of water mains.

City may, in its discretion, opt to make the repairs for which Contractor is responsible with its own forces. In such cases, the repairs will be made at Contractor's expense in accordance with the emergency repair rate schedule of the City of Santa Rosa Water Department. The City may make repairs whenever restoration of service requires extraordinary speed or special equipment. Contractor will be billed accordingly and City shall have the right and option to withhold payment hereunder, or a portion thereof, for any such costs billed but not promptly paid by Contractor.

6-4.02 Salvage: All valves, hydrants, and other appurtenances of the water system that are the property of City and removed by Contractor shall be delivered to the City's Municipal Services Center (55 Stony Point Road) unless Contractor has obtained specific written approval from the City of Santa Rosa Water Department to otherwise dispose of the materials.

6-4.03 Trade Names and Alternatives: Unless otherwise specified, material and equipment specifications that identify a particular patent, trade name or manufacturer, may be satisfied through substitute materials and equipment accepted by the City. Contractor may offer substitute materials and equipment of equal or better quality to the City. Any such offer shall be made in writing to the Engineer at least four weeks in advance of the time Contractor wishes to order the materials or equipment. Contractor shall include sufficient data which, together with any other information the Engineer may require, will enable the Engineer to determine the acceptability of the materials and equipment. When the substitute materials or equipment necessitate changes to any part of the work, the information shall include drawings and details showing all such changes and Contractor shall perform these changes as a part of any acceptance of substitute materials or equipment. The use of substituted materials and equipment will be permitted only after written acceptance of the materials and equipment by the Engineer. Such acceptance shall not relieve the Contractor from full responsibility for the sufficiency, quality and performance of the substitute materials and equipment.

The City will not, under any circumstances, acknowledge or consider any offers to accept substitute materials or equipment between the dates of public notice of advertisement and the bid opening.

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.02A(1) Forfeitures for Health and Safety Violations: Contractor shall comply with all applicable provisions of the Santa Rosa City Code and any failure to do so shall constitute a breach of the Contract. In the event of any violation of the Santa Rosa City Code that may impact public health and safety, including, but not limited to Chapter 17-12, "Storm Water" and Chapter 13-04, "Street Encroachments," City shall have the right to impose a charge against Contractor in an amount equal to $500.00 per violation per day. Prior to the imposition of any charge hereunder, City shall first provide a written notice to Contractor of the violation and setting forth a reasonable period of time for Contractor to cure the violation(s). In the event Contractor fails to cure any such violation within the time provided, City shall have the right, in addition to all other rights and remedies available to City, to deduct and withhold as a permanent forfeiture by Contractor the appropriate amounts from any payment otherwise due Contractor under this Contract.

7-1.02K(2) Wages: Pursuant to Labor Code sections 1770 *et seq*., each laborer or mechanic of Contractor or any subcontractor engaged in work on the project under this contract shall be paid not less than the hourly wage rate of per diem wages set forth in the prevailing wage rate schedule published by the Director of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any subcontractor and such laborers and mechanics. A copy of the schedule of prevailing wage rates can be obtained online at www.dir.ca.gov or from the Department of Transportation and Public Works at 69 Stony Circle, Santa Rosa.

Any laborer or mechanic employed to perform work on the public works project under this Contract, which work is not covered by any of the foregoing classifications, shall be paid not less than the prevailing wage rate of per diem wages specified herein for the classification which most nearly corresponds to the work to be performed by the worker.

The foregoing specified prevailing wage rates are minimum rates only, and Contractor may pay any wage rate in excess of the applicable rate.

Pursuant to Labor Code Section 1775, Contractor as a penalty to the owner shall forfeit not more than $200.00 for each calendar day, or a portion thereof, for each worker paid less than the prevailing wage rate established by the Department of Industrial Relations for such work or craft in which such worker is employed. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage rate shall be paid to each worker by Contractor.

Contractor shall only provide prevailing wage reports upon written request from City. When requested, these prevailing wage reports must be redacted by the Contractor prior to providing them to City.

7-1.02K(4) Apprentices: Contractor agrees to comply with Chapter 1, Part 7, Division 2, sections 1777.5 *et seq*. of the California Labor Code. These sections require contractors and subcontractors to employ apprentices in apprenticeable occupations in a ratio of not less than one hour of apprentice work for each five hours of journeyman work (unless an exception is granted in accordance with Section 1777.5), and the contractors and subcontractors shall not discriminate among otherwise qualified employees as apprentices solely on the ground of sex, race, religion, creed, national origin, ancestry, or color. Only apprentices as defined in Labor Code section 3077, who are in training under apprenticeship standards and who have written apprentice agreements will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprenticeable occupations.

7-1.02K(6)(a)(1) Notice to Vendors: Attention is directed to the current OSHA Standards. All equipment, tools and materials which are furnished and/or installed as part of this Contract shall meet or exceed the aforementioned standards in order to be considered acceptable.

7-1.02K(6)(b) Excavation Safety: When the digging or excavation occurs during project construction, Contractor shall:

a. Promptly notify City in writing of the following conditions before any such conditions are disturbed:

   1. Material that the Contractor believes may be hazardous waste as defined in Health and Safety Code section 25117 that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law;
   2. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
   3. Physical conditions at the site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in the type of work under the Contract.

b. The City will investigate the conditions and will issue a change order under the terms of the Contract if it finds that the conditions warrant it.

c. If a dispute arises between City and Contractor as to whether a change order is warranted, Contractor shall not be excused from any scheduled completion date provided for in the Contract but shall proceed with all work to be performed under the Contract.

7-1.02K(6)(b)(1) Trench Excavation Safety Plans: When the estimated cost for the excavation of any trench or trenches five feet or more in depth will exceed $25,000.00, Contractor shall submit to the Engineer in advance of excavation a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards established by the construction safety orders, or if the trench is anticipated to be greater than 20 feet, the plan shall be prepared by a registered civil or structural engineer.

A permit to do the above described work shall be obtained from the State of California, Division of Industrial Safety. Proof of such permit shall be submitted to the Engineer prior to starting the trench work.

Full compensation for complying with the provisions of this section shall be considered as included in the Contract price and no additional allowance will be made for the work.

7-1.02K(6)(d) Confined Space Safety: Any confined space entry for this project, including but not limited to manhole or water storage tank entry, will require a confined space entry permit pursuant to Cal/OSHA regulations as set forth in title 8 California Code of Regulations (CCR) sections 5157 or 5158. Confined space entry shall have the meaning ascribed in title 8 CCR sections 5157 and 5158. For any confined space entry for construction operations regulated by title 8 CCR section 1502, Contractor shall comply with title 8 CCR section 5158, “Other Confined Space Operations.” For any other confined space operations, Contractor shall comply with title 8 CCR section 5157, “Permit-Required Confined Spaces.”

Attention is directed to the technical specifications in the Special Provisions for information regarding entry to any City maintained confined space. Pursuant to title 8 CCR section 5157, Contractor is required to obtain any available information regarding hazards and operations for any City maintained confined spaces. The City maintained Confined Space Entry Manual is available for viewing at the City of Santa Rosa Water Department or Transportation and Public Works Department office at 69 Stony Circle, Santa Rosa.

Contractor shall immediately inform the Engineer of any previously unidentified hazards confronted or created during confined space entry.

7-1.02L(2)(a) Patents and Royalties: All fees, royalties, or claims for any patented invention, article, process or method that may be used upon or in any manner connected with the work under this Contract shall be paid by Contractor. Contractor and its sureties shall protect and hold harmless City and its officers, agents, and employees from any and all demands made for such fees royalties or claims brought or made by any third party, and before the final payment is made on the account of the Contract, Contractor shall, if requested by City, furnish acceptable proof of a proper release from all such claims and liabilities.

Should Contractor, its officers, agents, or employees, or any one of them be enjoined from furnishing or using any invention, article, material, or plans supplied or required to be supplied or used under the Contract, Contractor shall promptly substitute other articles, materials, or appliances in lieu thereof of equal efficiency, quality, finish, suitability, and market value, and satisfactory in all respects to the Engineer. In the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use any such invention, article, materials, or plans as may be required to be supplied by the Contract, Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary for City, its officers, agents, and employees, or any one of them to use such invention, article, materials, or appliance without being disturbed or in any way interfered with by any proceeding in law of equity on account thereof. Should Contractor neglect or refuse to make the substitution promptly or to pay such royalties and secure such licenses as may be necessary, then in that event the Engineer shall have the right to make such substitutions or City may pay such royalties and secure such licenses and charge Contractor even though final payment under the Contract may have been made.

7-1.02M(3) Mined Materials: California Public Contract Code section 20676 prohibits surface mining operators which are subject to the Surface Mining and Reclamation Act of 1975 (SMARA) from selling California mined construction material to the City unless the operator is identified in a list referred as the **3098 List**. The List, which is maintained by the Department of Conservation's Office of Mine Reclamation (OMR), changes throughout the year and can be viewed at the OMR website: http://www.consrv.ca.gov/OMR/ab_3098_list/index.htm. To confirm whether or not a specific operator is on the List at any given time, Contractor shall call the OMR at (916)323-9198.

7-1.03A Maintaining Traffic: Attention is directed to Sections 7-1.04 of the Standard Specifications and to the following modifications thereof.

If construction is within City owned right-of-way, provisions shall be made for the safe passage of public traffic through the work site at all times consistent with the requirements of Santa Rosa City Code Chapter 13-04.

Except for projects to be performed under a minor contract, Contractor shall install and maintain project identification signs at each end of the project or as directed by the Engineer two weeks prior to any construction activity. City shall furnish the appropriate sign panels upon request from Contractor. To mount the sign panels, Contractor shall furnish and install 4" X 4" posts or mount by other appropriate methods as approved by the Engineer. These sign panels shall be returned to the City Corporation Yard at 55 Stony Point Road after completion of the project.

Two weeks prior to any construction activity, advance notice signs for road closures shall be furnished and installed by Contractor at each end of the project and shall remain in place throughout the duration of the subject closure. Details of panel construction and lettering shall be approved by the Engineer.

Contractor shall furnish, install, and maintain at its expense all barricades, signs, lights, and other devices necessary to adequately warn of any obstructions to the traveled and pedestrian way and provide flaggers as necessary for the safety of public traffic and pedestrians and to provide access to property adjacent to the work site and Contractor shall comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101, *et seq*.) (ADA) and any regulations and guidelines issued pursuant to the ADA.

Contractor shall comply with the current edition of the California Manual of Uniform Traffic Control Devices (CA MUTCD) for all items related to traffic within the work site.

Rain and other occurrences that may cause the suspension or delay of the work shall in no way relieve Contractor of its responsibility to provide traffic control and public access through the work site as specified herein. At all times, Contractor shall keep at the work site such materials, forces and equipment as may be necessary to keep roads, streets, and driveways within the work site open to traffic and in good repair and shall expedite the passage of such traffic, using such forces and equipment as may be necessary.

Should Contractor fail, in the opinion of the Engineer, to provide all the materials, forces and equipment necessary to maintain traffic through the work site as set forth herein, City may take steps necessary to remedy any such failure, including but not limited to causing such work to be performed and/or suspending any further work under the Contract. Any such remedial cost and expense incurred by the City, plus an administrative charge of 15%, shall be immediately due and payable by Contractor and may be deducted from any amounts owed to Contractor hereunder. In the event there are insufficient sums owed to Contractor hereunder to cover the foregoing costs and charges, City shall have the right to pursue any other remedy to recover the same, including but not limited to, proceeding against any surety or bond in favor of City. City's rights under Section 7-1.02 are intended to be in addition to and not in lieu of any charges imposed by City against Contractor under Section 7-1.02A(1) above for violations of the Santa Rosa City Code.

Contractor shall be responsible for informing emergency response agencies operating within the area of the work of obstructions to either public or private roads caused by reason of Contractor's operations hereunder.

Contractor shall make provisions for the safe passage of pedestrians around the project work site at all times.

8 PROSECUTION AND PROGRESS

8-1.01A Assignments: Once awarded, this Contract shall not be transferred, assigned, or sub-contracted, except as herein expressly provided without the prior written consent of the City in the City's sole and absolute discretion. See Section 5-1.12 of the Standard Specifications.

8-1.04B Standard Start: Contractor shall begin work within ten calendar days after the date authorized in the Notice to Proceed and shall diligently prosecute the Contract to completion before the expiration of:

35 WORKING DAYS

8-1.05 Time: Working days will be counted beginning with the day the Contractor begins work or with the tenth day after the date authorized in the Notice to Proceed, whichever occurs first.

Unless otherwise directed by Engineer, Contractor shall not conduct any activities that generate noise earlier than 7:00 a.m. or later than 5:00 p.m.

8-1.10 Liquidated Damages: Contractor hereby agrees that Contractor shall pay to the City liquidated damages for each and every calendar day delay over and above the number of working days prescribed above for finishing the work in the amount shown in Section 8-1.10 of the Standard Specifications.

9 MEASUREMENT AND PAYMENT

9-1.04 Force Account Work: All work done on a force account basis shall be recorded daily on report sheets prepared by Contractor and signed by both the Engineer and Contractor. Such reports shall thereafter be considered the true record of force account work performed during the project. Such reports shall be furnished to the Engineer and a copy retained by Contractor.

All extensions of labor, equipment, and material costs shall be completed by Contractor and submitted to the Engineer within 30 days of the completion of the extra work. Completed and extended extra work reports received later than the times herein prescribed may be deemed invalid and rejected without payment at the discretion of the Engineer.

9-1.07 Payment Adjustments For Price Index Fluctuations: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

9-1.16 Progress Payments: Once each month for progress pay purposes, the City will prepare a written estimate of the total amount of completed work and accepted materials purchased by Contractor but not installed. The City shall retain five percent of such estimated value of the completed work and the unused materials and pay Contractor the balance after deducting all previous payments and all sums to be retained under the provisions of the Contract. No such estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the Contract or when, in the Engineer's judgment, the total value of the completed work since the last estimate is less than $500.00. No such estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

After Contract acceptance, the Engineer will prepare a written proposed final estimate of the proposed final quantities of work completed under the Contract and the value of such work and will submit such estimate to Contractor. The City shall retain five percent of such estimated value of the work done and shall pay to Contractor the balance after deducting all amounts to be retained under the provisions of the Contract.

The City may, at its option and at any time, retain out of any amounts due Contractor sums sufficient to cover any unpaid claims of City or others, provided that sworn statements of all non-City claims shall have been filed with the Director of Finance.

9-1.16E(6) Substitution of Securities for Withheld Amounts: Pursuant to Public Contract Code section 22300, securities may be substituted for any moneys withheld by City to ensure performance under this Contract, provided that substitution of securities provisions shall not be required in contracts in which there will be financing provided by the Farmer's Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (7 USC sections 1921 *et seq*.), and where federal regulations or policies or both do not allow the substitution of securities. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally chartered bank as the escrow agent, which shall then pay such moneys to Contractor. The Director of Finance is authorized to execute substitution of securities agreements on behalf of the City. The City will return the securities to Contractor upon satisfactory completion of the Contract as determined by City in its sole discretion and the resolution of all outstanding claims against the securities. Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit or any other security mutually agreed to by Contractor and the

City, provided that the substituted security is equal to or not less than five percent of the Contract amount.

Security substitutions must be submitted by Contractor and approved by City prior to the time of the first progress payment to be made under the Contract. No other method of substituting securities for retention will be accepted. The security substitution shall be done only upon execution of an agreement satisfactory to City which includes the following provisions:

a. The amount of securities to be deposited;
b. The terms and conditions of conversion to cash in case of the default of Contractor; and
c. The procedure for return of securities upon completion of the Contract.

9-1.17D Final Payment and Claims: The processing of payment of the final estimate shall not be commenced less than 35 days after the date of recording of the Notice of Completion with the County Recorder's Office. Contractor is advised that it takes approximately ten days for a check to be issued following a request for payment.

Contractor shall submit its written statement of all claims for additional compensation under the Contract to the Engineer within 15 days after submission to Contractor of the proposed final estimate.

If Contractor does not file a claim within the 15 day period, or upon Contractor's approval, the Engineer will issue a final written estimate and the City shall pay to Contractor the entire sum due after deducting all previous payments, if any, and all amounts to be retained under the provisions of the Contract.

If Contractor files a claim within the 15 day period, the Engineer will furnish a semi-final estimate and pay the amount due under the semi-final estimate within 30 days. The semi-final estimate is conclusive as to the amount payable except as may be affected by claims and any amount retained. The Engineer shall then consider and investigate such claim and shall make such revision in the final quantities as the Engineer may find to be due and shall then make and issue a final written estimate. The City will pay the amount due, after deducting all previous payments, if any, and amounts to be retained under the provisions of the Contract.

Any and all prior partial estimates and payments shall be subject to correction in the final estimate and payment.

The final estimate shall be conclusive and binding against both parties to the Contract on all questions relating to the performance of the Contract and the amount of work done thereunder and compensation therefor, except in the case of gross error.

9-1.17D(3) Final Determination of Claims: Claims filed by Contractor shall be in sufficient detail to enable the Engineer to determine the basis and amount of the Claims. Contractor shall also furnish reasonable documentation to the City to support Claims. If additional information is required by the Engineer, Contractor shall provide such information to the Engineer no later than the 15th day after receipt of the written request from the Engineer. If the 15th day falls on a weekend, holiday, or day City offices are closed, then the information shall be provided to the Engineer no later than close of the next business day. Failure to submit the requested information to the Engineer within the time specified will be sufficient cause for denying the Claim.

Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated Claim investigator or auditor shall have access to those records and any other records as may be reasonably required by the Engineer to determine the facts or contentions in each Claim. Failure to grant access to such records shall be sufficient cause for denying the Claims.

9-1.22 Arbitration: Any references to Arbitration in the Standard Specifications are deleted in their entirety.

Claims submitted by Contractor shall be accompanied by a notarized certificate containing the following language:

Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code sections 12650 *et seq*., the undersigned,

_____,
(Name)

_____ of
(Title)

_____
(Contractor)

hereby certifies that the claim for additional compensation made herein is supported by a true statement of the actual costs incurred and time expended on this project and is fully documented by records maintained by Contractor.

Dated _____

/s/_____

Subscribed and sworn before me this _____ day of

_____

_____
Notary Public

My Commission Expires _____

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead expenses, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the City at its discretion.

Any costs or expenses incurred by the City in reviewing or auditing any claims that are not supported by Contractor's cost accounting or other records shall be deemed to be damages incurred by the City within the meaning of the California False Claims Act.

CITY OF SANTA ROSA
HEARN AVE ABATEMENT & DEMOLITION
967, 980, 1004 HEARN AVENUE, SANTA ROSA, CA 95407

PROJECT MANUAL

OCTOBER 4, 2023

VOLUME 1 OF 1

GROUP 4 ARCHITECTURE RESEARCH & PLANNING
GROUP 4 PROJECT: 22592-01
CITY OF SANTA ROSA PROJECT: F002585
CITY OF SANTA ROSA FILE: 2023-0032

SECTION 02 4116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

A. Demolition of designated structures and removal of materials from site.

B. Demolition and removal of site improvements adjacent to a building or structure to be demolished.
   1. Disconnecting, capping or sealing and abandoning in place of identified utilities.

1.3 RELATED SECTIONS

A. Section 01 5000 - Temporary Facilities and Controls: Barriers, fences, landscape protection, and dust control.

B. Section 01 7700 – Closeout Procedures: Project record documents.

C. Section 01 7839 – Project Record Documents.

1.4 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.
   1. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.

B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or recycled.

1.5 ACTION SUBMITTALS

A. Shop Drawings: Indicate areas of demolition, location and construction of barricades, fences, and temporary work. , and removal sequence and location of salvageable items.

B. Proposed Environmental-Protection Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.

C. Schedule of Building Demolition Activities: Indicate the following:
   1. Detailed sequence of demolition and removal work, with starting and ending dates for each activity.

2. Interruption of utility services.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Locations of temporary protection and means of egress.
5. Coordination of Owner's continuing use of premises.

1.6 INFORMATIONAL SUBMITTALS

A. Inventory: After building demolition is complete, submit a list of items that have been removed and salvaged.

1.7 PROJECT RECORD DOCUMENTS

A. Accurately record actual locations of capped utilities and subsurface obstructions.

1.8 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Company specializing in performing the Work of this Section with minimum 5 years documented experience.

B. Regulatory Requirements: Comply with governing local, state, federal, and EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Pre-demolition Conference: Conduct conference at Project site. Review methods and procedures related to building demolition including, but not limited to, the following:
1. Inspect and discuss condition of construction to be demolished.
2. Review structural load limitations of existing structures.
3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review and finalize protection requirements.

1.9 SITE CONDITIONS

A. The project site is in an area known to be a habitat for California Tiger Salamanders. Consultant shall retain a subconsultant to observe for potential California tiger salamander burrows during site work. The subconsultant shall provide a registered biologist during fieldwork to walk a path in front of vehicles while on-site to identify potential California tiger salamander burrows so that vehicles can avoid potential burrows. The subconsultant will provide a field daily report upon completion of site activities each day.

B. Buildings to be demolished will be vacated and their use discontinued before start of Work.

C. Demolition area fronts an active public way. Conduct building demolition so public way will not be disrupted.
1. Provide not less than 72 hours' notice to Owner of demolition start.
2. Maintain access to existing sidewalks and other adjacent occupied or used facilities.
   a. Do not close or obstruct walkways, exits, or other occupied or used facilities without written permission from authorities having jurisdiction.

D. Owner assumes no responsibility for buildings and structures to be demolished.
   1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

E. Hazardous materials are present in building to be selectively demolished. A 'Bulk Asbestos Analysis Report' on the presence of hazardous materials is on file for review and use. Examine this report to become aware of locations where hazardous materials are present.
   1. Report Author:
      ProTech
      1208 Main Street
      Redwood City, CA 94063
      650-569-4020
      Date: April 19, 2023

   2. Laboratory Testing Agency:
      SGC Forensic Labroartories.
      3777 Depot Road, Suite 409
      Hayward, CA 94545
      510-887-8828
      Project Job No.: 412-151-35
      Date: June 1, 2023

F. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified in the Bulk Asbestos Analysis Report which is available through the Construction Manager.

G. Do not disturb hazardous materials or items suspected of containing hazardous materials. Contact Construction Manager for directions on how to proceed with construction in areas where such materials are found.

H. Storage or sale of removed items or materials on-site is not permitted.

1.10 COORDINATION

A. Arrange demolition schedule so as not to interfere with public way.

PART 2 - PRODUCTS

2.1 REGULATORY REQUIREMENTS

A. Conform to applicable code for demolition of structures, safety of adjacent structures, dust control, runoff control, and disposal procedures.

B. Obtain required permits from authorities.

C. Notify affected utility companies before starting Work and comply with their requirements.

D. Do not close or obstruct roadways, sidewalks, or hydrants without permits.

E. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Survey existing conditions and correlate with requirements indicated to determine extent of building demolition required.
   1. Owner does not guarantee that existing conditions are the same as those indicated in property survey document.

B. Inventory and record the condition of items to be removed and salvaged.

C. When unanticipated mechanical, electrical, or structural elements are encountered, investigate and measure the nature and extent of the element. Promptly submit a written report to Architect.
   1. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

3.2 PREPARATION

A. Provide, erect, and maintain temporary barriers and security devices at locations indicated.
   1. Protect existing landscaping materials, appurtenances, structures which are not to be demolished.

B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of demolition.

C. Mark location of utilities.

D. Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving buildings and structures to be demolished.
   1. Owner will arrange to shut off indicated utilities when requested by Contractor.
   2. Arrange to shut off indicated utilities with utility companies.
   3. If utility services are required to be removed, relocated, or abandoned, before proceeding with building demolition provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
   4. Cut off pipe or conduit a minimum of 24 inches (610 mm) below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 DEMOLITION REQUIREMENTS

A. Conduct demolition to minimize interference with adjacent structures.
   1. Cease operations immediately if adjacent structures appear to be in danger. Notify Owner. Do not resume operations until directed to do so.

B. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.

C. Obtain written permission from adjacent property owners when demolition equipment will traverse, infringe upon, or limit access to their property.

D. Sprinkle Work with water to minimize dust. Provide hoses and water connections for this purpose.

3.4 DEMOLITION

A. General: Demolish indicated existing buildings and structures and site improvements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Do not use cutting torches until work area is cleared of flammable materials. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
2. Maintain adequate ventilation when using cutting torches.
3. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Engineering Surveys: Perform surveys as the Work progresses to detect hazards that may result from building demolition activities.

C. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner or building manager and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
3. Disconnect, remove, cap, and identify designated utilities within demolition areas.

D. Existing Utilities: Cut off pipe or conduit a minimum of 24 inches (610 mm) below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

E. Hazardous Materials: remove hazardous materials, including lead-containing materials and asbestos-containing materials, according to applicable regulations.

F. Masonry: Cut masonry at junctures with construction indicated to remain, using power-driven saw, then remove masonry between saw cuts.

G. Carpet and Pad: Remove in large pieces and roll tightly after removing demolition debris, trash, adhesive, and tack strips.

H. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect in accordance with owner's requirements.

I. Remove demolished materials from site.

J. Do not burn or bury materials on site. Leave site in clean condition.

K. Remove temporary work.

3.5 REPAIRS

A. General: Promptly repair damage to adjacent construction caused by building demolition operations.

B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.

C. Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Hazardous Materials: dispose according to local and state requirements for lead-containing materials and asbestos-containing materials. Note materials that are "<1% ACM" have unique disposal requirements.

C. Burning: Do not burn demolished materials.

D. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Construction Waste Management: Manage construction waste in accordance with provisions of Section 01 7419 Construction Waste Management and Disposal.

B. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

3.8 PROTECTION

A. Existing Facilities: Protect adjacent walkways, building entries, and other building facilities during demolition operations.

B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by Owner, Architect, and Construction Manager, items may be removed to a suitable, protected storage location during demolition and cleaned and reinstalled in their original locations after demolition operations are complete.

C. Existing Plantings to Remain: protect plantings by erecting a temporary fence around the drip line of any trees to remain. Where demolition activities overlap with drip line, adjust demolition methods to avoid damage to plantings.

D. Existing Utilities: Maintain utility services indicated to remain and protect them against damage during demolition operations.
   1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
   2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
      a. Provide at least 72 hours' notice to Owner if shutdown of service is required during changeover.

E. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Division 1 Section "Temporary Facilities and Controls."
   1. Protect existing site improvements, appurtenances, and landscaping to remain.
   2. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
   3. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   4. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
   5. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
   6. Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise from occupied portions of adjacent buildings.

END OF SECTION 02 4116

ProTech
Consulting & Engineering

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Asbestos Abatement Specification

&

Appendix 1
Lead-Containing Materials
Instructions to All Bidders/Contractors

PROJECT

Santa Rosa Hearn Community Hub
967, 980 & 1004 Hearn Avenue
Santa Rosa, California

Prepared For:
Group 4 Architecture, Research and Planning
211 Linden Avenue
South San Francisco, CA. 94008

Prepared By:
ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063

Document Version:
August 16, 2023

••• ATTENTION ALL CONTRACTORS •••

Limited Use of This Document

This document has been prepared for the exclusive use of ProTech's client and is not intended for use by any other party. The scope of work and results presented in this report may not be appropriate for uses by any other party. Any use by a third party of this report shall be at their own risk and shall constitute a release and an agreement to defend and indemnify ProTech from any and all liability in connection therewith whether arising out of ProTech's negligence or otherwise.

This Is Not A Construction Safety Plan

This asbestos abatement specification does not address general construction safety. The contractor shall comply with all construction safety orders, rules, regulations, standards, and other project documents that apply to this work, including but not limited to: general construction safety, electrical safety, fall protection, fire safety, ladder safety, etc.

Asbestos Limitations & Participation of All Contractor

During the course of this project, previously unidentified suspect ACM may be discovered. Upon discovery, all work in and around the suspect ACM should cease until conditions are assessed and any necessary remediation options are arranged.

Contractor participation is required to ensure that this scope of work is complete. If the asbestos data and/or this specification do not address all areas and materials to be impacted, additional inspection and sampling work must be conducted by a certified asbestos inspection professional. Contractor's of any trade should delay at-risk work and report to the General Contractor (project authority) if:

- Their work requires them impact areas or materials not addressed in the data or this specification.
- Their scope of work is changed, expanded and/or revised to include areas or materials not addressed in the data or this specification.

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HAZMAT PROJECT SPECIFICATION

ASBESTOS ABATEMENT

PART 1 - GENERAL AND ADMINISTRATIVE REQUIREMENTS

1.00 DESCRIPTION

A. The asbestos abatement contractor shall furnish all labor, material, facilities, equipment, services, employee training and testing, permits and agreements necessary to perform the work required for asbestos removal, encapsulation, decontamination, disposal, and all other work in accordance with these specifications, and all relevant regulatory standards including: Environmental Protections Agency (EPA), Cal-EPA, Bay Area Air Quality Management District (BAAQMD), the Occupational Safety and Health Administration (OSHA), the State of California Department of Industrial Relations (Cal/OSHA), the recommendations of the National Institute of Occupations Safety and Health (NIOSH), and any other applicable federal, state and local government regulations. Whenever there is a conflict or overlap of the above references, the most stringent provision shall apply.

B. Contractor must visit the work site to obtain first-hand knowledge of all existing conditions including ACM quantities. Contractor is responsible for all unusual conditions or deviations from the specifications that exist at the time of their site examination, and such conditions must be reflected in the bid proposal. Contractor will not be given extra payments above the accepted bid prices for conditions that can be determined by examining the site, all Contract Documents, and drawings prior to the submission of proposals.

C. No signs may be displayed on or about the Owner's property (except those required by law) without the Owner's specific approval; the size, content, and location to be as specified by the Owner. Advertising signs displaying the word "asbestos" or implying asbestos abatement are prohibited at the work site or around the facility.

1.01 DESCRIPTION OF WORK

A. The work specified herein includes the abatement, encapsulation, and disposal of ACM by qualified persons who are knowledgeable, trained, and certified to perform such work in compliance with all applicable federal, state, and local codes and regulations.

D. General Project Requirements:

1. Pre-Abatement Tasks
   - Submit required pre-job submittals prior to mobilization
   - Individually fit test each worker with appropriate respiratory protection.
   - Seal and/or lock-out HVAC supply duct servicing abatement work areas
   - Install GFI power sources
2. Work Area Preparation
   - Prepare work area containment systems as specified
   - Initiate negative air, HEPA filtration machinery
   - Construct decontamination facilities as specified
   - Install magnehelic gage with continuous disc chart recorder
   - Where necessary, remove and dispose of non-ACM building components, finishes, fixtures, etc. that are scheduled for demolition to access all ACM/ACCM.
3. Asbestos Abatement Activities
   - Wet removal all ACM as specified. Where necessary, remove and dispose of non-ACM building components, finishes, fixtures, etc. that are scheduled for demolition to access all ACM/ACCM.

- Detail clean all barriers and work area surfaces.
- Following final inspection of the work area, perform encapsulation of all work areas surfaces.
- Following visual and final clearance, remove all barriers and check for any residual ACM debris.
- Demobilize from site.
- Submit all project close-out submittal documents.

4. Asbestos Abatement Scope of Work
   - The work specified herein includes the removal of ACM at the subject site.
   - The Contractor shall wet remove and dispose of all ACM as follows:

Asbestos-Containing Materials (ACM)
(Greater than 1% Asbestos)

	Material Description	Material, System, Location	Approx. Quant.	Current Condition Reg. Assessment	
				Cal OSHA	EPA/ AQMD
	976 Hearn				
1	Gray Transite shingles	Exterior walls for the house and garage	5,000 sq ft	Class 2 Abatement	Category II Non-friable
2	Gray Transite, flue pipe	Above the hot water heater in laundry room	<20 ln ft.	Class 2 Abatement	Category II Non-friable
	980 Hearn				
1	Tan sheet flooring	Kitchen & pantry	400 sq ft	Class 2 Abatement	RACM
2	Tan sheet flooring	Bathroom	75 sq ft	Class 2 Abatement	RACM
3	Gray roof mastic	House flashing and penetrations	50 ln ft	Class 2 Abatement	Category I Non-friable
4	Black built up roofing	Garage roof	1,000 sq ft	Class 2 Abatement	Category I Non-friable
5	Black roof mastic	Flashing for garage	5 sq ft.	Class 2 Abatement	Category I Non-friable
	1004 Hearn				
	Gray Transite flue pipes	Kitchen exhaust and right rear bedroom	2 pipes 20 ln ft.	Class 2 Abatement	Category II Non-friable
	Black roof mastic	Patches and penetrations	50 sq ft.	Class 2 Abatement	Category I Non-friable

Less Than 1% Asbestos Materials
(<1% Confirmed by PLM 400 Point Count)

	Material Description	Material, System, Location	Approx. Quant.	Current Condition Reg. Assessment	
				Cal OSHA	EPA/ AQMD
	976 Hearn				
1	Textured drywall, Joint tape & joint compound	Most walls and ceilings	4500 sq ft <1% chr by composite	Class 2 Abatement	Non-ACM
2	Topping texture	Most walls and ceilings	Included with item 1 <1% chr by layer	Un-classified	Non-ACM
3	Smooth drywall, Joint tape & joint compound	Walls and ceilings for lower-level front room and bathroom	1100 sq ft. <1% chr by composite	Class 2	Non-ACM
	980 Hearn				
1	Smooth drywall, Joint tape & joint compound	Walls and ceilings throughout	4,000 sq ft <1% chr by composite	Class 2 Abatement	Non-ACM Friable
	1004 Hearn				
1	Smooth drywall, Joint tape & joint compound	Walls and ceilings for left rear room	500 sq ft. <1% chr by composite	Class 2	Non-ACM

1.02 DEFINITIONS

Abatement - Procedures to control fiber release from asbestos-containing building materials. Includes removal, enclosure or encapsulation.

Air Monitoring - The process of measuring the asbestos fiber content of a specific volume of air in a stated period of time using methods approved or recommended by OSHA, EPA, NIOSH or other method approved by Owner or Consultant.

Amended water - means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

Asbestos - includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered. For purposes of this standard, "asbestos" includes PACM, as defined below.

Asbestos-Containing Building Material (ACBM): Means any construction material which contains greater than 1% asbestos.

Asbestos-Containing Construction Material (ACCM): Means any construction material that contains $^{1}/_{10}$ of 1% to 1% asbestos by weight.

Asbestos-containing material (ACM) - means any material containing more than one percent asbestos.

Authorized person - means any person authorized by the employer and required by work duties to be present in regulated areas.

Class I asbestos work - means activities involving the removal of TSI and surfacing ACM and PACM.

Class II asbestos work - means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work - means repair and maintenance operations, where "ACM", including TSI and surfacing, is likely to ACM and PACM, may be disturbed.

Class IV asbestos work - means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Clean room - means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

Competent person - means, in addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specially trained in a training course which meet meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class II and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at [40 CFR 763.92 (a)(2)].

Consultant - For the purpose of the work described herein, ProTech Consulting and Engineering shall be the Consultant.

Critical barrier - means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Demolition - means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

Disturbance - means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

Employee exposure - means that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Equipment room (change room) - means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Glovebag - means not more than a 60 x 60-inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

High-efficiency particulate air (HEPA) - filter means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

Homogeneous area - means an area of surfacing material or thermal system insulation that is uniform in color and texture.

Intact - means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos it is no longer likely to be bound with its matrix.

Regulated area - means: an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

Removal - means all operations where ACM, ACCM, ACBM, and/or PACM is taken out or stripped from structures or substrates and includes demolition operations.

Renovation - means the modifying of any existing structure, or portion thereof.

Repair - means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Surfacing material - means material that is sprayed troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Surfacing ACM - means surfacing material which contains more than 1% asbestos.

Thermal system insulation (TSI) - means ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain.

Thermal system insulation ACM - is thermal system insulation which contains more than 1% asbestos.

1.03 ASBESTOS HAZARD

A Asbestos-containing material when damaged or disturbed is subject to fiber releases. Wet methods are a primary means of controlling fiber release. Strict compliance with each of the provisions outlined in these specifications for the encapsulation, repair and handling of asbestos-containing material is of great importance, because:

1. The inhalation of airborne asbestos fibers can cause very serious often fatal diseases.
2. Workers may not be aware they are inhaling asbestos fibers.
3. Symptoms of the diseases do not appear for many years.
4. Only the contractor and his employees can prevent the inhalation of asbestos fibers which can lead to the development of asbestos-related disease.

B. Proposition 65 Notice: Under California Health and Safety Code Sections 25249.5 through 25249.13, asbestos has been listed as a chemical known to the State of California to cause cancer. As a Contractor, you and your employees will be working in areas in which asbestos-containing materials are present. This notice constitutes the warning of the presence of a known carcinogen required by Proposition 65. It is your duty to follow all requirements of Proposition 65.

1.04 CONTRACTOR QUALIFICATIONS

A. Licensing, Certification:
The Contractor shall possess all required licenses, registrations, and credentials to perform the work of this specification. All credentials shall be valid, current and in good standing prior to, and throughout all work performed by Contractor. Credentials shall include but not necessarily be limited to: asbestos license issued by the California State Contractors Licensing Board and Department of Occupational Safety and Health Administration (DOSH asbestos registration).

B. Personnel training:
The work specified herein shall be performed by under the direct management and supervision of a competent person and technicians/workers who are trained, knowledgeable and qualified in the state-of-the-art techniques of asbestos abatement, handling and subsequent cleaning of contaminated areas.

C. Project oversight and supervision:
The Contractor must provide a full-time supervisor who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person shall be the Contractor's Competent Person as required by 40 CFR Part 763 and OSHA in CCR Title 8, § 1529. The Competent person shall be the Contractor's representative responsible for compliance with all applicable federal, state, and local regulations, particularly those

relating to asbestos-containing material. This person must have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures, have had a minimum of two (2) years on-the-job training and meet any additional requirements set forth in CCR Title 8, § 1529 for a Competent Person.

1.05 NOTICES AND RECORD KEEPING

A. Contractor shall maintain for at least thirty (30) years, a record for this asbestos project. The record shall include the following information: The name, address, and social security number of all personnel involved with the project, the name address and social security number of the OSHA "Competent Person" who supervised the work, the amount of asbestos material that was removed, repaired, encapsulated or disturbed, the commencement and completion date of the work, copies of Hazardous Waste Manifest(s), personal air monitoring results and any other appropriate information.

B. Special Reports:
Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Owner's Representative and others affected by occurrence.

C. Reporting Unusual Events:
When an event of unusual and significant nature occurs at the site (examples: failure of negative pressure system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date.

D. Reporting Accidents:
Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

E. Daily Logs and Journals:
During the work, Contractor shall maintain a daily log which will be kept at the job site. Items to be included in the daily log shall include but are not limited to the following:

1. Meetings; purpose, attendees, discussions, items of resolution (brief)

2. Visitations; authorized and unauthorized

3. Sign-in sheets of all personnel entering and leaving the work area

5. Personal air monitoring results

1.06 PROJECT SUBMITTALS AND ON SITE DOCUMENTS

A. Pre-Job Submittals:
Before the start of work, submit the following to the Owner's Representative for review. No work shall begin until the Owner or Owner's representative has approved the following submittals:

Pre-Job Submittal Requirements		
	Submittal Requirement	Submittal Contents
1	Abatement Work Plan	Provide site specific information related to: • Site preparation and containment construction • Asbestos abatement/removal procedures • Waste handling and disposal procedures • Emergency contingency plan for accidents, breach of containment, power failure, water leakage and fire
2	Contractor Licensing & Registration	Current Certification: • **C-22 License -** issued by the California Contractor State License Board (CSLB) • **Asbestos Registration** - issued by the Department of Occupational Safety and Health (DOSH) per Title 8 CCR 341.6 *Note: BPC §7058.5 asbestos certification is allow with appropriate CSLB licensing.*
3	Respiratory Protection Program	Written program that complies with OSHA requirements: • CFR 1910.134 • CCR Title 8, § 1529 • CCR Title 8 § 5144, CFR • ANSI Z88.2
4	Schedule	Detailed schedule of values and duration for each portion of work including: • Project start • Mobilization • Containment set-up (form each work area) • Abatement and final cleanup • Tear-down/demobilization
5	Waste Transportation and Disposal	• Waste hauler information • Asbestos waste sites information • Provide EPA, DOT, and DHS, licenses, registrations, and certifications for all vendors
6	Abatement Supervisor	Current Certification: • **Training** - AHERA Accredited Contractor Supervisor / Cal OSHA Competent Person (per 40 CFR Part 763 and CCR Title 8, § 1529) • **Medical surveillance** – medical approval for respirator (per CCR Title 8, § 1529) • **Respirator fit test**
7	Abatement Worker	Current Certification: • **Training** - AHERA Accredited Worker (per 40 CFR Part 763 and CCR Title 8, § 1529) • **Medical surveillance** – medical approval for respirator (per CCR Title 8, § 1529) • **Respirator fit test**
8	Regulatory Notifications	• **Cal OSHA** - notification per Title 8 CCR 341.9 • **AQMD** (Air Quality Management District) - notification as required
9	Safety Data Sheet	Submit SDSs in accordance with the OSHA Hazard Communication Standard (Title 8 CCR 5194) for materials, chemicals, and supplies proposed for use during the work of this specification.

B. Post-Job Submittals:
Upon completion of the project, the Contractor shall provide 2 copies of all project documentation to the Owner. Post-job submittals shall be provided for final acceptance of the work by the Owner prior to final payment to the Contractor and normal termination of the Contract. This project documentation should include, but is not limited to:

Post-Job Submittal Requirements

	Submittal Requirement	Submittal Contents
1	Personal Air Monitoring Data	Certified laboratory reports of all personal air monitoring results with 8-hour TWA data
2	Waste Manifests & Shipment Records	All hazardous waste manifests and/or waste shipment records for the project. Records must document: • Waste material contain asbestos • Designated land-fill acceptance of all asbestos waste
3	Project Documentation	All field documentation including daily logs, journals, visitors log, special report, etc.
4	Updated Submittals	All documents delivered with the pre-job submittal package that that were updated, altered, or amended in any way during the project.

C. On-Site Records
The following records shall be maintained on-site and available for review throughout the entire course of the Work:

On-sight Records

	Record Requirement	Record Contents
1	Submittals	All pre-job submittal listed above.
2	Exposure Monitoring Results	Personal air monitoring results, including 30-minute excursion sampling results and calculated 8-hour TWA exposures for Contractor employees
3	Containment Log	Work Area entry/exit log for each day and each shift of the Work.
4	Safety Documents	• Contractor's IPP and Hazard Communication Programs • Confined Space Entry Program (if applicable).
5	Job Posting	• Emergency phone numbers • Required OSHA notifications

1.07 REFERENCE DOCUMENTS

A. All work specified in this document shall conform to the following applicable codes, ordinances, rules, regulations, orders, and standards. Where conflicting or overlapping requirements or specifications exist, the more stringent requirements shall apply.

B. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations, standards and guidance documents pertaining to work practices, hauling, disposal, and protection or workers, visitors to the site, and person occupying areas adjacent to the site.

C. Laws and Regulations: Compliance is required with applicable federal, state, municipal, and local regulations, including but not limited to:

1. Federal laws and regulations:
   • 29 CFR 1910.1001 - Asbestos standard – general industry
   • 29 CFR 1926.1101 (not 1926.58) - Asbestos standard – construction industry
   • 29 CFR 1910.134 - Respiratory protection standard
   • 40 CFR Part 61, Subpart M - NESHAPS– asbestos emissions standard
   • 40 CFR Part 763 – AHERA - Asbestos in Schools Rule, identification & notification, 1982

• PL 98-377 - Extends AHERA training for all asbestos work after 11/92
• 40 CFR Part 763 – AHERA, Asbestos in Schools Rule, final rule, 1987
• Occupational Safety and Health Act, 29 USC 651 et seq.
• Clean Air Act, 42 USC 7401 et seq.
• Hazardous Materials Transportation Act, 49 USC 1801 et seq.

2. State of California laws and regulations:
• CCR Title 8, Section 5208 - Asbestos standard – general industry
• CCR Title 8, Section 1529 - Asbestos standard – construction industry
• Labor Code 9000 et. seq. - 1-time carcinogen user registration, any amount
• Labor Code 6501.5 et. seq. - Annual contractor registration – asbestos work >100 sq ft
• Labor Code 6501.9 - Obligation to inspect prior to activities that may release fibers
• Health & safety Code 25359.7 - Owners (non-res.) duty to inform of hazardous substance
• Article 2.5, 341.9 - Contractor notification of each asbestos job
• Injury Prevention Program - Includes asbestos hazard discussion
• Article 2.6, 341.15 - Certification of each consultant and site-surveillance technician
• B&P Code Section 7058.5 - Certification exam for contractors disturbing >100 sq ft asbestos
• CSLB Open Book Asbestos Exam - All contractors, all trades
• Cal/EPA – Hazardous waste disposal
• Hazardous Substances Information and Training Act, Labor Code 6360 et seq.
• Labor Code 6401.7, 6408, 6501.5 through 6501.9, 6503.5, 6505.5, 9021.5, 9030
• CCR Title 8, Sections 340 through 342, 1531, 1509, 3202, 5144, 5156 through 5158, and 5194
• Hazardous Waste Control Law, Health and Safety Code 25100 et seq.
• Department of Toxic Substances Control (DTSC) including 22 CCR Div. 4.5 et seq.
• Safe Drinking Water and Toxic Enforcement Act of 1986
• Health & Safety Code 25249.5 et seq., including 22 CCR 12100 et seq.

3. All Applicable local laws and regulations including the local Air Quality Management District

D. Codes, Standards and Guidance Documents

1. National and State Fire Code, Electrical Code, Plumbing Code, Building Code, and other related codes where applicable.
2. ASTM - American Society for Testing and Materials
3. ANSI - American National Standards Institute
4. ULI - Underwriters Laboratories, Inc.

1.08 CONSULTANT / OWNERS REPRESENTATIVE

At the Owner's option, ProTech Consulting and Engineering may act as The Consultant and will be the Owner's Representative to Perform the following:

A. Have free access to all asbestos work areas.

B. To assist in interpretation of procedures.

C. To advise on all provisions of the contract documents pertaining to the control of asbestos.

D. Advise client on work stoppage if a situation presenting a health hazard to workers or Owner's employees or occupants of the building is observed. The Consultant shall not have authority to stop work without the client's approval.

E. To act as Owner's liaison in technical matters involving the asbestos-related work.

F. To perform air sampling inside the asbestos work area during the project. The Contractor shall cooperate fully with Consultant, consultant's agents and employees, and ensure cooperation of his/her workers during collection of air samples and work area inspections.

G. Consultant's role in advising the Owner on environmental health matters does not relieve the Contractor's obligation to comply with all applicable Federal, State, and local regulations, standards, and guidance documents. Air monitoring results generated by Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of worker's exposure to airborne asbestos, nor shall any other activity on the part of Consultant represent the Contractor's compliance with applicable health and safety regulations.

PART 2 - MATERIALS AND EQUIPMENT

2.00 MATERIALS

A. The Contractor shall provide all materials and equipment necessary to complete the Work in accordance with applicable regulations and this Specification. Equipment shall be free of asbestos-contamination resulting from use at previous job sites.

B. Deliver all materials in original packages, containers, or bundles bearing the name of the manufacturer and the brand name.

C. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage of contamination. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Materials that become contaminated shall be disposed of in accordance with this specification and applicable regulations.

D. All enclosures shall be constructed of non-combustible materials. Rigid barriers, if applicable, shall have a minimum fire rating of 1 hour.

E. The use of chemicals to remove asbestos-containing mastics or adhesives may not be a terpene-based solvent.

F. Ground Fault Circuit Interrupters shall be used on all equipment and temporary circuits.

G. Electrical extension cords shall be of appropriate rigidity and gauge for intended use and shall have an operative ground prong.

H. Electrical outlets and extension cords shall be provided by the Contractor for the purpose of air monitoring by the Owner or Owner's Representative. The Owner or Owner's Representative shall specify where the electrical outlets are needed, both inside and outside of the Regulated Area. Two electrical outlets shall be provided per designated area.

I. Contractor shall have on-site at all times a minimum of one 2A, 10 B:C (or larger) fire extinguisher. For large work areas, Contractor shall provide one fire extinguisher per 10,000 sq. ft. and locate fire extinguishers no further than 75 feet apart, starting from decontamination area entry way. The fire extinguishers shall have been inspected and certified as operative within the past 12 months.

J. The Contractor shall supply a fully stocked First Aid Kit in a visible place inside or directly outside (as is most convenient) of the clean room. The First Aid Kit shall remain on the job site at all times.

K. Adhesive tape shall be capable of sealing joints of adjacent sheet of polyethylene and for use in attachment of polyethylene sheet to finished or unfinished surfaces of similar materials and shall be capable of adhering under dry and wet conditions, including use of amended water.

L. Protective devices such as, but not limited to, disposable clothing, respirators, gloves, hard hats, etc. shall be used.

M. Encapsulant materials shall be the bridging and penetrating type and conform with the following characteristics:

    1. Encapsulants shall not be solvent-based or utilize a hydrocarbon in the liquid in which the solid parts of the encapsulant are suspended.

    2. Encapsulant shall not be flammable.

N. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

O. Polyethylene waste bags/containers shall be at least 6 mil thick. All waste containers shall be leak-tight and bare appropriate labeling as required by this specification and/or applicable regulatory requirements.

2.01 TOOLS AND EQUIPMENT

A. Provide suitable tools for removal of asbestos-containing materials and encapsulations of substrate as required.

B. Provide sufficient number of HEPA-filtered vacuum cleaners equipped with pick-up adapters, steel floor wands, crevice tools, and carpet tools.

C. Airless sprayers capable of spraying amended water shall be provided in sufficient number to allow continuous uninterrupted work.

D. Asbestos filtration devices shall utilize high efficiency particulate air (HEPA) filtration systems.

E. Transportation equipment, as required, shall be suitable for loading, temporary storage, and unloading of contaminated waste without exposure to persons or property, and shall be quiet in motion if used within the building.

PART 3 - EXECUTION

3.00 PROHIBITED ACTIVITIES

A. The following work practices and engineering controls are prohibited and shall not be used under any circumstances:

    1. High-speed abrasive disc saws that are not equipped at point of cut with HEPA filtered exhaust devices.

2. Compressed air used to remove asbestos, unless the compressed air is used in conjunction with an enclosed HEPA filtered ventilation system designed to capture the dust cloud created by the compressed air.

3. Dry sweeping, shoveling or other dry clean-up of dust and debris containing asbestos.

4. Employee rotation as a means of reducing employee exposure to asbestos.

B. Smoking, eating, drinking, applying cosmetics and chewing tobacco in regulated areas is prohibited. Hot work is prohibited unless authorized by Owner.

3.01 PERSONAL PROTECTION

A. Because there is no known safe level of exposure to asbestos, it is prudent to reduce worker's exposure to as low a level as possible. Proper respiratory protection is critical in minimizing exposure. No worker shall be exposed to levels greater than 0.01 f/cc over an 8-hour time weighted average as determined by the protection factor of the respirator worn and the work area fiber concentration. In any event, respirator selection shall comply with the minimum requirements required by DOSH per CCR Title 8, § 1529. The following table has been included to aid in determining the proper level of respiratory protection.

Airborne Concentration of Fibrous Dust	Required Respirator
Not in excess of 1 f/cc (10 X PEL), or otherwise as required independent of exposure pursuant to (h)(2)(iv)	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 X PEL)	Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100 X PEL)	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1,000 X PEL)	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (1,000 X PEL) or unknown concentration	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

B. The Contractor shall provide each employee with personally issued respirators equipped with high efficiency particulate filters. Respirators shall be approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to asbestos exists. A sufficient supply of filters shall be provided for replacement as required by the workers or applicable regulations. Disposable respirators shall not be used.

C. The Contractor shall provide medical examinations for all employees who may encounter an airborne fiber level of 0.1 f/cc or greater for an eight-hour time-weighted average. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the work area and who will be required to ware respiratory protection for reason. Examinations shall meet OSHA requirements as set forth in CCR Title 8, § 1529.

D. The Contractor shall require that a respirator be worn by any person in any regulated work area. Respirators shall be worn at all times, regardless of activity until the area has been cleared for re-occupancy.

E. During encapsulation operations or usage of other organic base aerosols (e.g., spray glue, expanding foam), workers shall be provided with combination cartridges consisting of organic vapor and HEPA section.

F. The use of single-use, disposable, or quarter-face respirators for any purpose shall be prohibited.

G. Fit Testing: Provide initial fitting of respiratory protection during a respiratory protection course of training as per CCR Title 8, § 1529. Fit the type(s) of respirator(s) to be actually worn by each individual. Allow an individual to use only those respirators for which he/she has been trained and fitted.

H. Additional Protective Equipment:

1. Coveralls: Provide disposable full-body coveralls and disposable head covers and require that they be worn by all workers in the work area. Provide a sufficient number for all required changes, for all workers in the work area.

2. Boots: Provide work boots with non-skid soles, for all workers. Provide boots at no cost to workers. Do not allow boots to be removed from the work area for any reason, after being contaminated with asbestos-containing material. Dispose of boots as asbestos contaminated waste at the end of the work.

3. Goggles: Provide eye protective (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury.

4. Gloves: Provide work gloves to all workers whose work may require protection of the hands and require that they be worn in the work area. Do not remove gloves from work area and dispose of as asbestos contaminated waste at the end of the work.

5. Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the contractor for the Owner, Owner's Representative, Project Administrator, and other authorized representatives who may inspect the job site. Provide two (2) respirators and six (6) complete coveralls and, where applicable, six (6) respirator filter changes per day.

3.02 AIR MONITORING

A. Compliance Air Monitoring:
1. Personal air monitoring (Exposure Monitoring) should be performed by the contractor as required to meet OSHA requirements as required by CCR Title 8, § 1529. Maintain an average airborne fiber counts within the regulated work area that does not exceed the following:

Type of Work	Fiber Counts Standard
Work performed within a full negative pressure enclosure system.	≤0.5 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)
Work performed in a regulated area but not in a full negative pressure enclosure system.	≤0.1 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)
Work performed in open areas – glovebag removal, roof abatement, exterior siding removal, etc.	≤0.01 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)

2. The contractor shall maintain an average airborne fiber count inside of the abatement work area that does not exceed the standard specified above. If fiber counts rise above the standard for any sample taken, revise work procedures to lower fiber counts. If the time-weighted average (TWA) fiber count for any work shift or eight-hour period exceeds the standard, stop all work, leave negative air system in operation and notify Owner's Representative. Do not recommence work until authorization in given in writing by the Owner's Representative.

B. Environmental Air Monitoring:

1. At the Owner's option, the Owner's representative will conduct environmental monitoring as the Owner's Representative and as the Owner's Air Sampling Specialist throughout the course of the project. The purpose of environmental (area) air monitoring by the Owner's Representative will be to detect faults in the work area isolation.

2. If environmental air samples exceed 0.01 fibers/CC or are statistically higher than pre-abatement air samples, the Contractor shall:

* Immediately and automatically stop all work
- Evacuate affected areas
- Regulate and isolate affected areas
- Decontaminate affected areas in accordance with this specification.
- Leave critical barriers in place until final visual and air clearance is given.
- Perform all such required cleaning or decontamination at no additional cost to the Owner.

C. Clearance Air Monitoring:

1. Following visual clearance of work areas by the Owner's Representative, air sample will be taken to determine compliance with work area clearance standards. Work areas will be considered cleared when the following criterion are met:

	Air Sample Analysis - Type	Clearance Standard
a.	Transmission Electron Microscopy (TEM) **collected under aggressive conditions.**	≤ 70 s/mm^2
b.	Phase Contrast Microscopy (PCM) **collected under aggressive conditions.**	< 0.01 f/cc
c.	No air samples required for open air work	N/A

2. The contractor may conduct his own air monitoring and laboratory testing if he elects to do so. The cost of such air monitoring and laboratory testing shall be at the contractor's expense.

3.03 SAFETY PROCEDURES FOR POWER AND LIGHTING

A. The use of wet methods for removal, repair, encapsulation or cleaning procedures increases the potential for electrical shock when working around electrical panels, conduit, light fixtures, alarm systems, junction boxes, transformers, etc. In coordination with the Owner, de-energize as much electrical equipment as possible to prevent electrical shock to employees performing the work. The Contractor shall use the following precautions:

1. Use non-conductive tools and vacuum attachments.

2. Utilize "hot line" covers over energized cables and power lines when possible.

3. Ensure all electrical equipment in use is properly grounded before the job starts. Check outlets, wiring, extension cords and power pickups.

4. Avoid stringing wiring across floors. Elevate wiring if possible.

5. Ensure electrical outlets are tightly sealed and taped to avoid water spray.

6. Determine operating voltages of equipment and lines before working on or near energized parts.

7. Energized parts must be insulated or guarded from employee contact and other conductive objects. Extension cords must be three-wire type and connected to a Ground Fault Interrupter (GFI) circuit.

8. Lock or secure de-energized circuits at panel and post warning signs.

3.04 TEMPORARY FACILITIES

A. Use qualified tradesmen for installation of temporary services and facilities. Locate temporary services and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the work and operations of the building.

B. Relocate, modify and extend services and facilities as required during the course of work so as to accommodate the entire work of the project. Provide new or used materials and equipment that are undamaged, clean and in serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use, by compliance with appropriate standards.

1. Electrical
   Temporary electrical services (if required) shall comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service. Provide receptacle outlets equipped with ground fault circuit interrupters, reset button and pilot light, for plug-in connection of power tools and equipment. Use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas of work.

2. Fire Protection
   Contractor shall have on-site at all times a minimum of one 2A, 10 B:C (or larger) fire extinguisher. For large work areas, Contractor shall provide one fire extinguisher per 10,000 sq. ft. and locate fire extinguishers no further than 75 feet apart, starting from decontamination area entry way. The fire extinguishers shall have been inspected and certified as operative within the past 12 months.

3. General
   At the completion of abatement work, clean all construction aids within the work area and/or wrap in one layer of 6 mil polyethylene sheet and seal before removal from the work area.

3.05 REGULATED WORK AREA – ACCESS CONTROL

A. The area where asbestos abatement work takes place is considered an asbestos contaminated area. All asbestos work shall be conducted within a regulated area as follows:

1. Demarcation:
   The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Warning signs that demarcate the regulated area shall be provided and displayed at each regulated area. Signs shall be posted at such a distance from such a location that any person may read the signs and take necessary protective steps before entering the asbestos work area. Warning signs shall read as follows:

   DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY

   In addition, where the use of respirators and protective clothing is required in the regulated area, the warning signs shall include the following:

   RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

   The contractor shall ensure that all persons working in and contiguous to regulated areas comprehend the warning signs. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

2. Access:
   Access to regulated areas shall be limited to authorized persons with proper training.

3. Respirators:
   All persons entering a regulated area shall be supplied with an appropriate respirator.

3.06 WORK AREA PREPARATION

A. HVAC System

1. Where possible, **disable Ventilating Systems** or any other system bringing air into or out of the work area. Disable system by disconnecting wires, removing circuit breakers, by lockable switch or other positive means that will prevent accidental premature restarting of equipment.

2. **Isolate the Heating Ventilating and Air Conditioning (HVAC) systems** to prevent airflow into or out of the work area. Seal all openings to ducts, fans, louvers, plenums, etc. with two layers of 6-mil polyethylene sheeting and secure with duct tape. Shut down and isolate the HVAC system prior to the start of any asbestos disturbance work. Contractor shall repair any damage to duct work, grilles, dampers, louvers or other HVAC equipment at the completion of the work.

3. HVAC equipment openings that cannot be properly sealed (due to forced air pressure) with polyethylene sheeting and duct tape. Will be **hard sealed using 1/4 inch plywood** or equivalent and mechanically sealed over air flow openings. Covered all hard sealed HVAC openings with two layers of 6 mil. polyethylene sheeting and sealed with duct tape (or equivalent).

B. Pre-Cleaning

1. General (non-asbestos) Pre-Cleaning
   Perform a general pre-cleaning of the entire work area prior to and following work areas set-up and containment so that it is generally free of non-asbestos trash, plastic, cardboard, debris, and gross amounts dust, etc. The work area shall be as clean as possible to give abatement workers an unencumbered working environment and limit the amount of asbestos waste to be disposed of.

2. All movable items of furnishings, equipment, etc., shall be secured in a clean uncontaminated room and covered with plastic sheeting. All non-movable items to be left in place shall be covered with 6 mil. polyethylene sheeting and sealed with duct tape.

3. Asbestos Pre-Cleaning
   Pre-clean all surfaces that have been affected by asbestos dust, debris, fall-out or contamination. Pre-cleaning shall include HEPA vacuuming and wet wiping of all affected surfaces.

D. **Section D Left Intentionally Blank**

E. Containment Systems and Engineering Controls for Abatement Operations:

Class II ACM Removal

Drywall & Topping Texture

1. **Critical Barriers:**
   Critical barriers shall be constructed by applying a double layer of 6 mil plastic sheeting, in an airtight fashion, over all penetrations into and out of the Regulated Area. Penetrations include, but are not limited to all doors, entry ways, openings, holes, penetrations, windows, vents, drains, etc.

2. **Protective Barriers:**
   The regulated work area shall be protected by installing a layer of 6 mil plastic sheeting in an air tight fashion, over all work area surfaces not scheduled for abatement.

3. **Drop Sheet:**
   A drop sheet of 4-6 mil plastic sheeting shall be used to protect all surfaces below and otherwise affected by the removal activity. Ensure that the drop sheet system covers the entire affected area so that all gross ACM debris is captured on the drop sheet system.

4. **3-Stage Decontamination Facility:**
   A three stage decontamination unit shall be connected to the NPE for personnel entry/exit of the Regulated Area and include an equipment room, shower area and clean room.

5. **HEPA Air Filtration Devices (AFD):**
   Air filtration machines shall remain in operation 24-hours a day until final clearance of the work area has been achieved.

   - A sufficient number of HEPA filtered air machines shall be installed within the NPE to maintain a pressure differential of **minus 0.025** column inches of water across the containment barriers at all times.

- A sufficient number of HEPA air filtration machines shall be installed within the Regulated Area so that the actual operating capacity of the units provides a minimum of 4 air changes per hour.

- A manometer shall be installed to continuously monitor pressure differential inside the Work Area. Air machines shall remain in operation 24 hours a day until final clearance of the Work Area has been achieved.

Class II ACM Removal

Resilient Flooring

1. **Critical barriers:**
   Critical barriers shall be constructed by applying a single layer of 6 mil plastic sheeting, in an airtight fashion over all penetrations into and out of the regulated area. Penetrations include, but are not limited to all doors, entry ways, openings, holes, penetrations, windows, vents, drains, etc.

2. **Protective Barriers:**
   Components, equipment, building surfaces, items, etc. that are exposed to asbestos work shall be protected with 6 mil plastic and sealed with duct tape (or equivalent) during removal.

3. **Wall Protection:**
   A single layer of 6 mil plastic sheeting shall be installed on work area walls, doors, fixtures, cabinets, etc. at or near the affected removal area. The plastic shall extend from the flooring & wall interface up the wall a minimum 3 feet. The bottom edge (at the floor) of the plastic shall be completely sealed with duct or masking tape.

4. **Single Stage Decontamination Facility:**
   An equipment room shall be connected to the regulated area for personnel entry/exit of the Regulated Area.

5. **HEPA Air Filtration Devices (AFD):**
   Air filtration machines shall remain in operation 24-hours a day until final clearance of the work area has been achieved.

   - A sufficient number of HEPA air filtration machines shall be installed within the Regulated Area so that the actual operating capacity of the units provides a minimum of 4 air changes per hour.

   - Air machines shall be placed in a configuration, which allows ventilation of the Regulated Area and movement of contaminated air away from the breathing zone of abatement workers. Air machine exhaust shall be directed outside of buildings and away from occupied areas. Exact location(s) of air machine exhaust shall be arranged between Owner or Owner's Representative and Contractor prior to start of work.

   - The Contractor shall provide enough HEPA air filtration units to maintain a pressure differential of **minus 0.025** column inches of water across the containment barriers at all times.

   - A manometer shall be installed to continuously monitor pressure differential inside the Work Area. Air machines shall remain in operation 24 hours a day until final clearance of the Work Area has been achieved.

Class II ACM Removal

• Intact Removal •

Transite Siding & Flue Pipe

1. **Containment:**
   A single layer of 6 mil plastic sheeting shall be installed directly beneath the work to be performed and shall be of sufficient dimensions to capture all debris generated as a result of the work.

2. **Protective Barriers:**
   Components, equipment, building surfaces, items, etc. that are exposed to asbestos work shall be protected with 6 mil plastic and sealed with duct tape (or equivalent) during removal.

3. **Drop Sheet:**
   A drop sheet of 6 mil plastic sheeting shall be used to protect all surfaces below and otherwise affected by the removal activity. Ensure that the drop sheet system covers the entire affected area so that all gross ACM debris is captured on the drop sheet system.

4. **Single Stage Decontamination Facility:**
   An equipment room shall be connected to the regulated area for personnel entry/exit of the Regulated Area.

5. **Intact Removal:**
   To the greatest extent possible, ACM containing components shall be removed intact without disturbing the asbestos. If for any reason intact removal is not possible and ACM will be significantly disturbed, stop all work until an alternative plan is approved by the Owner's representative.

6. **Local Exhaust AFD:**
   Air machines shall be placed in a configuration, which allows ventilation of the Regulated Area and movement of contaminated air away from the breathing zone of abatement workers. Air machine exhaust shall be directed outside of buildings and away from occupied areas. Exact location(s) of air machine exhaust shall be arranged between Owner or Owner's Representative and Contractor prior to start of work.

Class II ACM Removal

Roofing

1. **Critical barriers:**
   Critical barriers shall be constructed by applying a double layer of 6 mil plastic sheeting, in an airtight fashion, over all openings within, and proximate to, the Regulated Area including but not limited to: HVAC air intakes, vents, and penetrations.

3. **Drop Sheet:**
   A single layer of 6 mil plastic sheeting shall be installed directly beneath roof removal work on the ground or other adjacent surfaces and shall be of sufficient dimensions to capture all debris generated as a result of the work.

4. **Single Stage Decontamination Facility:**
   An equipment room shall be connected to the regulated area for personnel entry/exit of the Regulated Area.

5. **Non-Intact Waste:**
   Any ACM that is not intact shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift. While the material remains on the roof it shall either be kept wet, placed in an impermeable waste bag, or wrapped in plastic sheeting.

6. **Waste Handling:**
   Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust or debris outside the Regulated Area.

7. **Cutting ACM Roofing:**
   Cutting machines (if used) shall be equipped with a HEPA dust collection system. The affected by cutting shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety. If wetting is deemed unpracticed or unsafe, the Contractor shall submit an alternative dust collection system in writing. Work shall not commence until the Consultant or Owners' Representative approves the alternative plan.

3.07 Decontamination Facilities

A. The Contractor will ensure that all authorized personnel enter and exit the regulated area through the Decontamination Facility.

B. Decontamination facilities shall be provided at all location(s) where workers enter or exit the work area. These facilities will be placed at the most strategic location(s) to allow easy access and usage while maintaining the ability to secure the building during non working hours.

C. Decontamination facilities must be of sufficient size as to accommodate cleaning of all affected items and personnel.

D. All items and personnel that enter the Regulated Area must exit through the decontamination facility. Affected items/personnel including tools, equipment, supplies, personal protective equipment, packaged waste, personnel, etc. shall be cleaned before exiting the decontamination facility so that contamination cannot be spread beyond the Regulated Area.

E. Hazmat personnel will enter and exit the regulated area through decontamination system.

F. This section specifies various types of decontamination facilities to be used on this project. The specific decontamination system to be used for a particular work area is specified in Section 3.06, E (Work Area Preparation).

   1. **3-Stage Decontamination Facility**

      a. The decontamination unit will consist of at least a clean room, a shower room, and an equipment room in series. Each room shall be constructed of materials that are leak-tight and air-tight. Each room shall be connected in succession separated by 6 mil polyethylene air locks. Access between any two rooms in the decontamination unit shall be through air locks with at least 3 feet separating each curtained door way. The decontamination facility shall be sealed to the critical barrier system of the Regulated Area.

- Clean Room: The clean room will be sized to accommodate the size of the work crew. If lockers are not available storage of the workers personal equipment and street clothing, the contractor may use plastic bags. Do not allow shower overflow water in the clean room. Wet wipe and HEPA-vac clean room surfaces after each shift and as needed to maintain clean and dry area.

- Shower Room: The shower room shall be constructed with a minimum of a single shower or what ever is adequate for the size of the work crew. Each shower head shall be supplied with hot and cold water. The shower shall be constructed to prevent leakage.

    • Install a totally submersible waterproof sump pump with a integral float switch inside the collection water pan. Provide sump pump size to pump twice the flow capacity of all showers or hoses supplying the water to the sump. Install a sump capable of pumping debris, sand, plaster or other materials which may wash off during decontamination procedures.

    • The contractor must install a filtering system for removing contaminants from the drained water. The system must have as a two stage cascading filtering system capable of filtering down to **5 µm or smaller.** Filtered water may then be disposed of into the sanitary sewer.

    • The contractor shall maintain a supply of filters for the filtering system. The filters will be changed as often as needed to prevent the system from clogging.

- Equipment/Dirty Room: The equipment room will be used for storage of tools and equipment. Workers will remove dirty protective clothing in this space.

b. Require all workers to adhere to the following personal decontamination procedures whenever they leave the work area. Waste and equipment leaving the abatement area must also be decontaminated in the same manner. Upon entering the asbestos abatement project, **remove street cloths** in the clean change room and put on a respirator and clean protective clothing before entering the equipment room or work area. Before exiting the work area, the following procedures are required;

    - Remove gross contamination from clothing.

    - Proceed to the equipment room and remove all clothing except the respirator.

    - Deposit contaminated clothing in labeled disposal container.

    - Still wearing the respirator, proceed naked to the shower and clean the outside of the respirator with soap and water while showering.

    - Remove respirator.

    - Thoroughly wash and shampoo hair and body.

- Remove filters from respirator, if breathing has becomes restricted or as often as the user feels is needful. Dispose of the filter elements in the container supplied for this purpose.

- Wash and rinse the inside of the respirator.

- Following showering and drying off, proceed directly to the clean change room and put on street cloths

- Contaminated footwear shall be stored in the equipment room or disposed of as contaminated waste or cleaned thoroughly inside and out using soap and water before removing from the shower area.

Typical 3-Stage decon with shower

2. **Single Stage Decontamination Facility:**

The minimum decontamination facilities for this project shall be a Single Stage Decontamination (decon) facility as follows:

a. The decon shall be constructed of materials that are leak-tight. Access into and out of the Equipment Room shall be through air locks with at least 3 feet separating each curtained door way.

b. The decon shall be adjacent to the Regulated Area and shall be located where workers enter or exit the work area. The decontamination facility will be placed at the most strategic location(s) to allow easy access and usage for personnel and shall capable of withstanding crew usage without deterioration for the entire duration of the project; PPE; tools and equipment. The equipment room will be sealed to the critical barrier system of the Regulated Area.

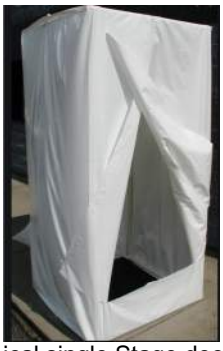
c. The decon shall be equipped so that each crew member has access to a clean source of water for clean-up & decontamination (a bucket of water for shared uses **shall not** be permitted); clean, dry towels, HEPA equipped vacuum cleaner; storage area for workers street clothing.

d. Contractor shall keep the decon clean and dry. Damp wipe and HEPA vacuum all surfaces throughout the shift and as needed and at the end each shift.

e. Require all workers to adhere to the following personal decontamination procedures whenever they leave the Regulated Area. Upon entering the asbestos abatement project, **remove street cloths** in a clean change room, don

required respiratory protection and clean protective clothing. Before exiting the work area, the following procedures are required:

- Remove gross contamination from clothing via HEPA vacuum.
- Deposit contaminated clothing in labeled disposal container.
- Still wearing the respirator clean the outside of the respirator and body with clean water.
- Remove respirator and wash face with clean water.
- Remove filters from respirator, if breathing has becomes restricted or as often as the user feels is needful. Dispose of the filter elements in the container supplied for this purpose.
- Wash and rinse the inside of the respirator.
- Drying off and put on street cloths.



Typical single Stage decon

3. Decontamination Area:

a. The Contractor shall establish a decontamination area that is adjacent to the Regulated Area for the decontamination of personnel and all equipment, tools, supplies, packaged waste, etc.

b. The decontamination area shall consist of an area covered by impermeable drop cloth on the floor or horizontal working surface.

c. Before removal protective clothing, personnel shall clean clothing with a HEPA vacuum in the decontamination area.

d. The equipment room shall be equipped so that each crew member has access to a clean source of water for clean-up & decontamination (a bucket of water for shared uses **shall not** be permitted); clean, dry towels, HEPA equipped vacuum cleaner; storage area for workers street clothing.

3.08 HEPA AIR FILTRATION DEVICES (AFD)

A. All Vacuums and air filtration devices (AFD) shall be equipped with HEPA filters.

B. HEPA filtered AFD(s) shall be operated and maintained in accordance with the manufacturers specifications and guidelines. Proper operation shall include appropriate use and maintenance of the two stage pre-filter and primary HEPA filtration system.

C. AFD exhaust shall be located so that makeup air enters work area primarily through decontamination facilities and traverses work area as much as possible.

D. To the extent feasible, vent all AFD exhaust to the outside of building. The Contractor shall ensure that AFD exhaust does not spill directly into occupied areas.

E. Start operation of HEPA AFD fan units before beginning work (before any asbestos containing material is disturbed). No work involving the removal or disturbance of asbestos shall commence until the specified negative pressure level is met.

F. After abatement work has begun, run AFD units continuously to maintain a constant negative pressure until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop. Do not shut down pressured differential air system during encapsulating procedures, unless authorized by the Consultant in writing.

G. Prior to final air testing, remove pre-filter and wipe out inside lip of HEPA filtered fan unit.

H. When a final inspection and the results of final air tests indicate that the area has been decontaminated, exhaust units may be removed from the work area. Before removal from the work area, remove and properly dispose of pre-filter, and seal intake to the machine with 6 mil polyethylene to prevent environmental contamination from the filters.

3.09 ASBESTOS ABATEMENT

A. The Contractor shall:

1. Clearly mark and label all emergency exits located within the Regulated Area. Emergency exits shall be kept free of obstructions at all times. A razor knife or other cutting tool shall be posted in the vicinity of each emergency exit located within the Regulated Area and used to facilitate quick exit of the Work Area in an emergency situation.

2. Receive authorization from the Owner or Owner's Representative prior to initiating any asbestos removal activity. Owner or Owner's Representative shall conduct a pre-abatement inspection to ensure compliance with the Specification prior to authorizing start of any asbestos removal activities.

3. Inspect the integrity of all Regulated Area barriers and smoke test for leaks at the beginning of each shift. Any detected leaks shall be sealed prior to start of work.

4. Maintain a log of all personnel entering the Regulated Area. The Contractor shall not allow any person to enter the Regulated Area without prior approval of Owner or Owner's Representative. This includes Contractor employees newly assigned to the job site.

5. Provide authorized visitors with protective clothing, whenever they are required to enter the Regulated Area.

6. Ensure that each worker and authorized visitor shall follow the approved procedures established by the Contractor and the Owner.

7. Perform all work regardless of exposure using:
   a. HEPA vacuum cleaners
   b. wet methods
   c. Prompt clean-up and disposal of asbestos in leak-tight containers

8. Remove all existing asbestos-containing building materials as identified in the project scope of work as follows:

   a. Construct, install, and otherwise secure all barriers in such a manner that will ensure that they remain intact and serviceable throughout the duration of the project. All abatement work shall be halted in the event of any barrier breach. Breaches shall be immediately corrected/repaired and no work shall recommence until approved by the Owner's representative*.*

   b. Adequately wet asbestos- containing materials to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant.

   c. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal encapsulant to penetrate material thoroughly.

   d. Spray material repeatedly during the work process to maintain a continuously wet condition.

   e. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.

   f. Waste shall be packaged prior to each break and at the end of each shift. If applicable, Contractor shall make arrangements with Owner to store ACM waste in a secured area until waste can be removed from the job site.

   g. Contractor shall not drop or thrown Asbestos-containing material to the ground from high elevations. ACM packaging that could potentially break, spit, puncture, etc. shall be carried or passed to the ground by hand, hoist, or crane.

   h. Unwrapped ACM that is nonfriable and completely intact may be transferred to a closed receptacle in such manner so as to preclude the dispersion of any dust outside the Regulated Area.

9. Ensure that the level of respiratory protection worn by Contractor's employees is adequate to protect the employees from exposure to airborne asbestos fibers above the Permissible Exposure Limits.

10. Ensure airborne asbestos fiber levels inside the Work Area do not exceed a ceiling limit of 1 fiber per cubic centimeter (f/cc), as determined by personal or area air sampling, regardless of the level of respiratory protection worn by Contractors employees. If this level is exceeded, Contractor shall take immediate action to reduce airborne fiber concentrations. If this level is exceeded for 2 consecutive shifts, the Contractor shall cease asbestos removal operations and perform necessary clean-up to reduce the airborne asbestos fiber level to below 0.2 f/cc as indicated by subsequent air samplings.

11. Conduct personal exposure monitoring and provide monitoring results within 24 hours after samples are collected to Owner or Owner's Representative.

12. Notify Owner or Owner's representative immediately in the event of a breach of the containment barrier or spill of ACM outside of the Regulated Area. Take protective measures to ensure occupants adjacent to the spill or breach are not exposed to asbestos.

13. In the event of a breach of the containment barrier or spill of ACM outside of the Regulated Area, immediately stop work, repair the breach and clean-up the spilled material using wet methods and HEPA vacuuming.

14. In the event that a non-work area becomes contaminated with asbestos, the Contractor shall immediately and automatically stop all work. If the contaminated area is inside the building and outside of critical barriers, the Contractor shall erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor, etc.). Decontaminate the affected area in accordance with this specification. Leave critical barriers in place until final visual and air clearance is given.

15. That Contractor shall perform all required cleaning and/or decontamination at no additional cost to the Owner.

16. Shall not encapsulate abated surfaces until the work area has passed final inspection as determined by the Owner or Owner's Representative.

3.10 PACKAGING, LABELING, AND DISPOSAL OF ASBESTOS WASTE

A. It is the responsibility of the Contractor to comply with all current Federal, State and local regulations concerning the waste handling, transportation, and disposal of ACM/ACCM.

B. Asbestos Waste Packaging

1. All ACM/ACCM and ACM/ACCM-contaminated materials, supplies, clothing, debris, etc. shall adequately wetted and be placed into leak-tight disposal containers.

2. Personal protective equipment (PPE) i.e. suites/coveralls, respirator cartridges, etc. shall be packaged, labeled, and disposed of with the asbestos removed during use of the PPE.

C. Labeling

1. Asbestos disposal containers to be labeled as follows:

a. All asbestos and asbestos contaminated waste shall be with the following information:

b. In addition, all Hazardous ACM waste shall include the following labels:

HAZARDOUS WASTE

STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF
TOXIC SUBSTANCE CONTROL

Generator's Name
Address
Manifest No.

RQ, Asbestos, 9, NA2212, III

D. Disposal

1. Obtain any required permits and provide any required notices to the appropriate federal, state and local EPA agencies.

2. Waste manifest forms and/or waste shipment records shall be provided by the Contractor and include all information required by law.

3. Carefully load containerized waste on sealed trucks or other appropriate vehicles for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material. Take bags from the work area directly to a sealed truck or dumpster

4. Asbestos-containing hazardous waste materials shall be transported in a completely enclosed shipping container, open truck beds with tarpoline covers are not allowed unless first loaded in sealed drums. Double bagged material may be transported on open trucks if they are loaded in sealed drums. Label drums with same warning labels as bags. Uncontaminated drums may be reused. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification. If the waste shipment consists of non-friable, non-hazardous waste only, the materials may be transported to other than Class II waste sites.

5. Advise the sanitary landfill operator at least twenty-four hours in advance of transport of the quantity of friable and non-friable asbestos material to be delivered.

6. Waste water from wet stripping, shower room, and worker and equipment decontamination systems shall be filtered through a filtration treatment system capable of removing all particles 5 microns or greater in size before it is discharged into the sanitary sewer system.

7. At the burial site sealed plastic bags may be carefully dumped from the truck. If bags are broken or damaged leave bags of ACM waste in the truck and clean entire truck and contents using procedures set forth earlier in these documents.

8. Submit copies of all manifests, waste shipment records, and landfill receipts to Owner.

3.11 PROJECT DECONTAMINATION

A. Work of This Section includes the decontamination of the Regulated Area which may have become contaminated during abatement activities or which may previously have had elevated asbestos fiber counts. Decontamination includes all work area surfaces, equipment, the air within the regulated area and any other affected areas.

1. Carry out a final cleaning of all surfaces within the abatement work area including items of tools, equipment, supplies, ladders, scaffolding, hoses, cords, staging equipment, etc. Use of damp cleaning methods and mopping, and a High Efficiency Particulate Air (HEPA) Filtered vacuum shall be used.

2. Do not perform dry dusting or dry sweeping.

3. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste.

4. Remove unneeded tools and equipment from the abatement work area via the decontamination unit. Ensure that all equipment leaving the work area has been decontaminated and wrapped in 6 mil plastic sheeting.

B. Following a visual inspection by the Owner's representative perform encapsulation of the abatement area. Apply encapsulant using an airless sprayer in accordance with the manufacturers recommendations. Apply encapsulant liberally over the abated surfaces sufficient to completely cover all areas affected by the work.

C. Maintain negative air pressure for 24 hours to allow negative air machines to clean air of airborne asbestos fibers. Before final air monitoring remove pre-filters and wipe out inside lip of HEPA filtered fan unit.

3.12 FINAL CLEARANCE

A. The Owners Representative shall conduct a final inspection of the work area upon completion of all abatement and clean-up tasks. The contractor shall notify the Owner or Owner's Representative at least 24 hours in advance of the project completion.

B. The Contractor shall not encapsulate abated surfaces until the work area has passed final inspection as determined by the Owner's representative. The Owner's Representative shall inspect work area surfaces for asbestos residue and debris. If any such debris, residue, dust or other matter is found repeat final cleaning and continue decontamination procedure at no additional cost to the owner.

C. Following successful completion of final inspection, the Contractor shall apply an encapsulating agent to all abated surfaces. The Owner's Representative will not conduct final air clearance sampling until the encapsulating agent is completely dry.

D. The Owner's Representative shall conduct aggressive final air clearance as specified and notify the Contractor of results in a timely fashion. In the event that air clearance in not achieved, the Contractor shall re-clean and re-encapsulate the work areas prior to final clearance retake. All costs and fees associated with re-cleaning and re-testing of the work area will be paid by the Contractor.

E. Upon successful completion of final air clearance, as determined by the Owner's Representative, the Contractor shall remove all remaining equipment and plastic sheeting from the work area and restore the abatement work areas and all affected areas to pre-abatement conditions. Any small quantities of residual material found upon removal of the plastic sheeting shall be removed with a HEPA filtered vacuum cleaner and local area protection. If significant quantities, as determined by the Owner's Representative, are found then the entire area affected shall be decontaminated as specified herein.

END OF SECTION

ProTech
Consulting & Engineering

APPENDIX 1

ProTech
Consulting & Engineering

1208 Main Street, Redwood City, CA 94063
P: (650) 569-4020 • F: (650) 569-4023 • E: info@protech-cal.com

APPENDIX 1

LEAD-CONTAINING MATERIALS
Instructions to All Bidders/Contractors

PROJECT

Santa Rosa Hearn Community Hub
967, 980 & 1004 Hearn Avenue
Santa Rosa, California

PART 1 - INTRODUCTION

1.0 GENERAL

A. This section deals with general requirements and procedures in conjunction with lead-containing materials as identified by ProTech Consulting & Engineering in our report titled Pre-Demolition/Renovation Asbestos & Lead Survey & Evaluation (rpt no. 151-MA23ed.gk dated August 16, 2023).

B. This document delineates the basic safety and work requirements for all contractors on this project. The provisions set forth in these instructions will apply as a minimum rules to be followed by all contractors and their employees throughout the project. Contractors may elect to modify these provisions, but only to upgrade or increase the safety requirements, and only with concurrence of the Owner and/or Owner's representative.

C. Contractor must visit the work site to obtain first-hand knowledge of all existing conditions. Contractor is responsible for all unusual conditions or deviations from the specifications that exist at the time of their site examination, and such conditions must be reflected in the bid proposal. Contractor will not be given extra payments above the accepted bid prices for conditions that can be determined by examining the site and all Contract Documents prior to the submission of proposals.

1.1 SCOPE OF WORK

A. The scope of this project primarily involves lead-related construction work, including the demolition of structures with lead-coated building components. As a result, the specific tasks known as 'lead abatement,' which are designed to eliminate or reduce lead hazards, are not anticipated to be necessary or performed during this project. Instead, mechanical methods will be predominantly utilized for the lead-related construction work. Consequently, the completion of the work is not expected to require many, if any, trigger tasks, thereby minimizing the risk of lead exposure to personnel.

B. Each contractor who performs work at this site and impacts painted/coated surfaces shall:

1. Review lead-paint inspection data to assess if their particular work will impact lead-based paint (LBP) and/or lead-paint containing paint (LCP);

2. Ensure that all work is performed in accordance with applicable regulatory standards, this specification and other applicable contract documents.

3. Ensure that loose and peeling LBP is stabilized and/or contained so that the site is not impacted/contaminated with lead (Pb).

C. Three (3) types of lead-related construction materials have been found to be present at this project as follows:

Types of Lead Materials			
	Lead Level	Analysis Type	Standard
1.	**High Lead:** Lead-based paint/materials (LBP)	By XRF: By Paint Chip:	≥1 mg/cm² or greater ≥0.5 weight % or 5,000 mg/kg
2.	**Low Lead:** Lead containing material (LCM)	By XRF: By Paint Chip:	<1 mg/cm² <0.5 wt % of 5,000 mg/kg
3.	**No lead**: no lead detected by paint chip analysis	By XRF: By Paint Chip:	Requires paint chip confirmation No lead Detected or <0.006 wt %

D. Lead was detected on this site as follows:

Lead XRF Results

Lead-Based Paint (LBP) - (1 mg/cm² or greater)

18 XRF reading were positive for LBP - (high lead)

	Description (Color, Substrate, Component)	Component	Location(s)
1	Blue and gray ceramic wall tiles	Wall tile glazing	1004 bathrooms
2	White wood door paint	Wood door components	1004 wood doors throughout
3	White wood fascia/soffit/trim paint	Wood fascia, soffit and trim	1004 house and garage exterior throughout
4	White wood window paint	Wood window components	1004 house and garage wood windows throughout
5	White metal gutter paint	Metal gutter components	1004 Throughout
6	Green wood garage door paint	Wood door components	1004 garage
7	White drywall paint	Drywall walls and ceilings	980 throughout
8	Yellow ceramic countertop tiles	Ceramic tile glazing	980 kitchen
9	White wood ceiling paint	Wood ceilings	980 ceilings above drywall
10	White wood door paint	Wood door components	980 house and shed exterior doors throughout
11	White wood paint	Wood window components	980 windows throughout

See attached XRF data for details

Some materials have multiple positive readings

Lead-Containing Paint (LCP) - (Less than 1 mg/cm²)

71 XRF reading were positive for LCP - (low lead)

See attached XRF data for details

No Lead Detected

19 XRF reading were negative for lead – (no lead detected)

Note: Cal OSAH does not accept XRF results to prove that a material is non-lead. To treat a material as non-lead in an occupation situation, paint-chip laboratory analysis is required.

See attached XRF data for details

Paint Chips Sample Results

Representative paint-chip samples were collected to confirm (or rebut) the presence of lead in materials the showed very low (or no) lead content by XRF analysis.

Lead-Based Paint (LBP) - (≥.5 wt% or ≥5,000 ppm)

No Lead based paint was detected in the paint chips collected. See XRF data for LBP components

Lead-Containing Paint (LCP) - (>0 to <.5 wt% or <5,000 ppm)

	Description	Location	Sample No.	Results
1	White drywall paint	976 Hearn	LP-02	0.022
2	Stucco paint	980 Hearn- garage	LP-04	0.018
3	Stucco paint	980 Hearn - shed	LP-05	0.011
4	White Stucco paint	1004 Hearn	LP-08	0.038

No Lead Detected

	Description	Location	Sample No.	Results
1	White drywall paint	976 Hearn	LP-01	<0.007
2	White stucco paint	980 Hearn	LP-03	<0.007
3	White plaster paint	1004 Hearn	LP-06	<0.02
4	Orange drywall	1004 Hearn	LP-07	<0.007

E. For purposes of this project, any coated surfaces/components for which no data are available shall be assumed to contain detectable lead for Cal OSHA compliance purposes. The Contractor may, at Contractors sole expense perform addition paint testing and analysis by Atomic absorption (AA) spectroscopy to exclude building components form the special lead handling requirements of this specification. Deviations from this specification as a result of such testing must be submitted by the Contractor in writing. Deviations shall be subject to the review and approval of the Owner's Representative.

F. The Contractor shall obtain any necessary building or waste permits and notify local authorities if jurisdiction requires it.

1.2 CONTRACTOR QUALIFICATIONS

A. The work specified herein shall be performed by competent persons trained, knowledgeable and qualified in the state-of-the-art techniques of lead-related construction work, handling and subsequent cleaning of lead contaminated areas.

B. Project Supervisor – Competent Person:
The Contractor must provide a full-time General supervisor who is experienced in administration and supervision of lead-related construction projects. The supervisor shall possess current credentials as follows:

- Training required by Cal OSHA per Title 8 CCR 1532.1.
- Certification issued by the California Department of Public Health

The Contractors' competent person shall be capable of preventing, elimination and identifying existing lead hazards associated with the project. The supervisor shall have a work knowledge of, and the ability to read, understand and correctly interpret all the project documents and applicable regulatory standards. The Supervisor shall be trained, as required by Cal OSHA, and be CDPH certified. In addition, the Supervisor shall demonstrate that he/she has a minimum of two (2) years on-the-job experience.

C. Training – Lead Worker:
All workers assigned to tasks involving lead-related work shall possess current credentials as follows:

- Training required by Cal OSHA per Title 8 CCR 1532.1.
- Certification issued by the California Department oh Public Health

D. Licensing, Certification:
- The Contractor must hold a current, valid license issued by the California State Contractors Licensing Board.

E. Reporting Unusual Events:
When an event of unusual and significant nature occurs at the site (examples: failure of the containment system, injury, environmental exposure, etc.), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date. Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Owner's Representative and others affected by occurrence.

F. Reporting Accidents:
Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

G. Daily Logs and Journals:
During the work, Contractor shall maintain a daily log which will be kept at the job site. Items to be included in the daily log shall include but are not limited to the following:

1. Meetings; purpose, attendees, discussions, items of resolution (brief)

2. Visitations; authorized and unauthorized

3. Sign-in sheets of all personnel entering and leaving the work area

5. Personal air monitoring results – submit within 24 hours of sample collection

1.3 PRE-JOB SUBMITTALS

Before the start of work, submit the following to the Owner's Representative for review. No work shall begin until these submittals have been approved by the Owner or Owner's representative.

A. Experience:
Provide the name and location of at least three lead projects of comparable size and complexity with this work. Provide the name and telephone number of contact person at previous projects. Provide the final air monitoring decontamination fiber levels achieved.

B. Written Compliance program.
Prior to commencement of the job the Contractor shall establish and implement a written compliance program to achieve compliance with Cal OSHA requirements and HUD

guidelines. The written programs shall be available at the worksite for examination and copying. The written plan shall include at least the following:

1. A description of each activity in which lead is emitted; e.g. equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;

2. A description of the specific means that will be employed to achieve compliance and, where engineering controls are required engineering plans and studies used to determine methods selected for controlling exposure to lead;

3. A report of the technology considered in meeting the PEL;

4. Air monitoring data which documents the source of lead emissions;

5. A detailed schedule;

6. A work practice program which includes items required by Cal OSHA and prescribed by HUD.

7. An administrative control schedule as required by Cal OSHA

8. A description of arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead and of regulated areas.

9. Other relevant information.

10. Schedule of frequent and regular inspections of job sites, regulated areas, materials, and equipment to be made by a supervisor.

11. Include in the plan specific procedures for decontamination and work area isolation and set-up. Provide diagrams showing negative air placement (if applicable), decontamination locations, staging areas and waste bag-out areas. Note that nothing in-this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

C. Waste Transport/Active Asbestos Waste Site
Submit copies of proof of all EPA, DOT, and DHS, licenses, registrations, and certifications for all hazardous waste haulers and active lead waste sites intended for use on this project.

D. Worker Documentation:
Provide current documentation for each qualified competent Person and workers who will be assigned to the project. Submit documentation as follows:

1. Cal OSHA and CDPH Training Certification.
2. Biological - blood lead test for all Workers prior to project commencement.
3. Physician medical release for each Worker – written approval to don respiratory protection without restriction.
3. Respiratory fit test documentation.

E. Notifications:
Submit copies of any required notifications sent to federal, state and/or local agencies as required by applicable local, state and federal regulations.

F. Permits:
Submit copies of any required permits required by state and/or local regulations.

G. Licenses:
Submit copies of: valid California State Contractors License, and Local licenses and permits necessary to carry out the work of this contract.

H. Material Safety Data Sheets:
Submit the Material Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for applicable material proposed for use on the work including but not limited to encapsulant, surfactant, spray adhesive etc. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

1.4 PUBLIC SAFETY AND PUBLIC CONVENIENCE

A. The Contractor(s) shall take all necessary measures to ensure the safety of the general public and adjacent residents throughout the course of this project. The Contractor shall take adequate measures to make the building or work areas inaccessible to the public (such as temporary fencing if necessary).

B. The Contractor shall ensure that lead (in any form) does not contaminate the project site or adjacent property during this demolition process.

1.5 REGULATIONS

A. Contractors are required to follow all Federal, State, and local standards that regulate lead-related construction work and lead disposal including but not limited to: the California Department of Public Health, U.S. Environmental Protection Agency (EPA), the California Department of Occupational Safety and Health (Cal-OSHA), and any other applicable federal, state and local government regulations pertaining to lead containing materials, lead-based paints (LBP) and other lead-containing wastes.

B. The Contractor and all subcontractors shall ensure that each employee who will or may handle, impact, or otherwise disturb lead or encounter lead contaminated areas:
1 Receive proper and sufficient Cal OSHA and CDPH compliant training.
2 Receive proper and sufficient personal protection equipment

C. Lead-based paint and lead-containing paint materials and waste shall be handled in accordance with applicable laws and regulation. In the event of conflict, the more stringent requirement will apply. The Contractor(s) is alerted to, and shall become familiar with all laws and regulations regarding the generation, management, handling, characterization and disposal of lead (Hazards materials) including:

1 Environmental Protection Agency National Ambient Air Quality
2 Standards, as applicable (40 CFR 61)
3 Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1919.134 and 1926.62)
4 California Department of Occupational Safety and Health (inclusive of Cal/OSHA 8 CCR 1532.1, 3203, 5155, 5194, 5216)

5 California Environmental Protection Agency (Cal-EPA), (22 CCR Section 66000, et seq.)
6 California Department of Public Health (17 CCR Sections 3500061000)
7 Resources Conservation and Recovery Act (42 U.S.C. Section 6901 et seq., and regulations 40CFR part 260 et seq.)
8 California Health and Safety Code (Division 20 and regulations, and 22 CCR section 66000 et seq.).
9 Resource Conservation and Recovery Act
10 Federal Occupational Safety and Health Administration (Fed/OSHA) (29CFR 1910.134 and 1926.62)
11 Federal Environmental Protection Agency (Fed/EPA) (40 CFR50 et seq.) Federal Department of Transportation (49 CFR)
12 Other applicable federal, state, and local governmental regulations pertaining to lead hazards and lead waste.

PART 2 - WORKER PROTECTION

2.0 DESCRIPTION

A. This program is essential in minimizing risk of lead exposure to workers. The Contractor will minimize exposure to hazards through the use of engineering controls and good work practices. Respirators will not to be used as the primary or sole means of protection. Work practices and engineering controls will be implemented to reduce employee exposure to the greatest extent possible. Wetting the materials thoroughly will be the major engineering control. A negative air machine is running to help eliminate some of the air-borne lead materials. All debris will be cleaned up promptly.

B. Worker Protection will include respirator protection. protective clothing, gloves, and equipment, housekeeping, hygiene practices and medical surveillance.

C. Inhalation of lead dust and fumes, and ingestion resulting from contact with lead-contaminated food, cigarettes, clothing, or other objects, are the major routes of worker exposure to lead. Once absorbed, lead accumulates in the blood, soft tissues, and bones, with the highest accumulation initially in the liver and kidneys. Lead is stored in the bones for decades, and may cause toxic effects in adults as it is slowly released overtime. Chronic overexposure to lead results in damage to the kidneys, the central nervous system, the reproductive system, and the blood-forming organs. Adverse health effects in adults include: abdominal discomfort, anemia, colic, constipation, excessive tiredness, fine tremors, headache, high blood pressure , irritability, loss of appetite, muscle joint pain, sexual impotence, pigmentation on the gums, and others.

D. There are two primary routes of lead poisoning in occupation settings, they are;

1. Ingestion:
   Ingestion generally occurs by normal hand-to-mouth activity (such as eating) after hands have been in contact with lead dust or contaminated items.

2. Inhalation:
   Inhalation, or breathing of airborne lead generally occurs when lead coated surfaces or lead contaminated dust is disturbed and lead dust is released into the working environment.

E. Employers of employees who perform lead-related work are responsible for the development and implementation of a worker protection program in accordance with Title 8 CCR 1532.1. This program is essential in minimizing the worker risk of lead exposure.

F. The most effective way to protect workers is to minimize exposure through the use of engineering controls and good work practices. It is OSHA policy that respirators are not to be used as the sole means of protection when engineering controls are feasible to reduce employee exposure.

G. At a minimum, the following elements should be included in the employer's worker protection program for employees exposed to lead.

- Hazard Determination
- Worker Protection including: respirator protection, protective clothing and equipment, housekeeping, hygiene practices and medical surveillance.
- Worker Training and record keeping

2.1 WORKER EXPOSURE

A. The Contractor will limit airborne exposure to lead dusts in the workplace to the greatest extent possible with engineering controls and/or respiratory protection.

B. Initial monitoring will be performed that is representative of each affected employees 8-hour time weighted average (TWA) exposure to lead. The contractor shall collect full-shift personal air samples for affected employees that is representative of daily exposure to lead. Personal exposure monitoring shall include one sample for each job classification in each work area. Employee lead exposures shall be monitored by the Contractor in accordance with Cal OSHA standard Title 8 CCR 1532.1.

C. If the initial monitoring shows exposure levels to be below the Action Level of 30 $\mu g/m^3$, no further exposure assessment is required unless there is a change of equipment, process, control methods, personnel, or a new task is initiated.

D. If the action level (AL) of 30 micrograms per cubic meter of air (µg/m3) is exceeded, without regard to respiratory protection, compliance activities with Title 8 CCR 1532.1 will be implemented. Exposures above the permissible exposure limit (PEL) of 50 µg/m3 will not be permitted. Proper respiratory protection will be enforced to maintain exposure limits below the PEL (see respiratory protection).

2.2 MONITORING

A. Personal monitoring
   1. Personal air monitoring shall be the responsibility of the Contractor. The contractor shall collect full-shift personal air samples representative of each affected employee and each lead-related work task. Initial monitoring will be performed that is representative of each affected employees 8-hour time weighted average (TWA) exposure to lead. Daily personal monitoring will be performed on a minimum of 20% of the employees for each lead-related work activity. The Contractor shall post personal air monitoring results on the job site within 48 hours from collection. Employees will be given the opportunity to observe monitoring results.

2. If the initial monitoring shows exposure levels to be below the Action Level of 30 µg/m^3 for a particular activity, the Contractor shall implement a periodic monitoring schedule (for that particular activity).

3. Additional monitoring is required if there is a change of equipment, process, control methods, personnel, or a new task is initiated.

B. Environmental Monitoring

1. Air sampling may be conducted in areas adjacent to lead related work activities to document and monitor the effectiveness of engineering control procedures. Air samples shall be collected at the perimeter (outside) of active lead-related construction work. Perimeter monitoring will be performed to detect contamination outside of the regulated work area as a result of inadequate engineering controls and/or work practices. Samples may be collected as needed immediately adjacent to the lead abatement work in locations most vulnerable to contamination migration. Environmental air sampling, when conducted will be performed by the Owner's Representative.

2. If the environmental monitoring yields results in excess of 30 micrograms per cubic meter of air (ug/m3) or background levels (which ever is greater) as established by pre-construction monitoring, the Contractor shall extend the regulated area to include all affected areas. The Contractor shall contaminate all areas until HUD clearance criterion can be established.

2.3 RESPIRATORY PROTECTION

A. Until an exposure assessment is made by the Contractor, all employee performing lead-related trigger activities shall be treated as if exposed above the personal exposure limit (PEL, 50 mg/m^3) based on the following table:

TRIGGER ACTIVITY	ANTICIPATED EXPOSURE (µm/$µ^3$)
• Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.	Greater than 50
• Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean-up of dry abrasive blast residue.	Greater than 500
• Abrasive blasting • Welding • Cutting • Torch burning.	Greater than 2500

B. The following respiratory protection is required for exposure to lead aerosols:

Anticipated Exposure	Required Respirator
Greater than 50 µm/m^3	Half-mask, air purifying
Greater than 500 µm/m^3	Full-face, air purifying, or Tight fitting PAPR, or Supplied air, contiguous flow
Greater than 2500 µm/m^3	Supplied air, pressure demand

C. All respirators are required to be equipped with high efficient particulate air (HEPA) filters.

D. When chemicals and/or other restorable hazards are introduced into the project appropriate respiratory protection and other personal protective equipment will be utilized in accordance with manufacture and MSDS recommendations.

E. Respirators (NIOSH-approved) will be provided by Contractor when such equipment is deemed necessary to protect the health of the employee. Contractor shall provide respiratory protection devices which are applicable and suitable for the purpose intended. Contractor shall be responsible for the establishment and maintenance of the respiratory program.

F. Employees are required to wear a respirator when employee exposure to lead exceeds the PEL. The employer will provide a respirator to the employee at no cost. The employer will provide respirator training to all employees who wear a respirator. Medical exams per Title 8 CCR 1532.1 and CCR Subchapter 7. General Industry Safety Orders § 5144 will be provided at no cost to all employees who wear a respirator. The employee will be fit tested at initial assignment and at every 6 months, or after weight gain/loss of 15 pounds or more, growing/shaving mustache, facial deformation-dental work. The employer shall institute a written respiratory protection program.

G. For the safe use of any respirator, it is essential that the user be properly instructed in its operation and maintenance. Both supervisors and employees of Contractor, and its sub-contractors, shall be so instructed. Employees of Contractor, and its sub-contractors, shall be instructed and trained in the proper selection and use of respirators and their limitations. The Contractor employee, and those of sub-contractors, shall use the provided respirator in accordance with instructions and training received. All training shall be documented with records retained in the employee's training files.

H. A written Respiratory Protection Program which complies with 29 CFR, part 1910, section 134, and California Code of Regulations (CCR) Title 8 CCR, sections 1532.1 will be maintained and kept on site throughout the project.

2.4 PERSONAL PROTECTIVE EQUIPMENT

A. Until an exposure assessment is performed by the Contractor, the Contractor shall implement employee protective measures as described in Title 8 CCR 1532.1:

1. Appropriate respiratory protection
2. Appropriate personal protective clothing and equipment
3. Appropriate change areas
4. Appropriate hand wash facilities
5. Biological monitoring (blood testing)
6. Appropriate training

B. The Contractor will provide protective clothing to all employees potentially exposed to lead dusts during the work shift. Clean protective clothing will be provided to the employee on a daily basis at no cost to the employee. Lead contaminated work clothing will be removed in change rooms before lunch and at the end of the work shift. Soiled work clothes will be stored in closed, labeled containers. Waste work clothes will be sampled for lead content prior to disposal.

C. Protective goggles, gloves, hard-hats, disposable clothing, etc. will be provided to all employees potentially exposed to lead dusts or debris during the work shift.

2.5 MEDICAL MONITORING

A. Blood Testing:

1. Contractor(s) shall implement a biological monitoring program for this project. The program will consist of biological monitoring (blood testing) and analysis for lead and zinc protoporphyrin levels.

2. Employee's will be tested immediately be the start of the project, no employees shall be assigned to this project whose blood lead is at or above 40 µg/dl.

B. Physical Examination:

1. Contractor(s) whose employees who are required to don respiratory protection shall implement a Medical Surveillance Program. Employees must be cleared by the examining physician to wear a respirator and protective clothing while performing their project duties.

2. All personnel on-site shall have successfully completed a pre-placement or periodic medical examination in accordance with established Contractor policies and procedures, and consistent with the provisions of the OSHA respiratory standard 29 CFR 1910.134 nd Cal OSHA lead standard Title 8, 1532.1.

2.6 EMPLOYEE INFORMATION AND TRAINING

The Contractor will provide an information and training program, at least annually, to all employees potentially exposed to lead. This program will inform employees of the health hazards associated with lead exposure, the contents of Tile 8 Section 1532.1, the proper selection, fitting and use of respirators, the medical surveillance program, the employees access to records, engineering controls and work practices associated with the employees job assignment

2.7 RECORD KEEPING

The Contractor will keep records of all exposure monitoring for airborne lead. The records shall include the following information for each sample: date collected, sample number, duration, result, analytical method, activity represented, employees names and SS#'s represented, type of respiratory protection used.

PART 3 - EXECUTION

3.1 REGULATED AREAS

A. The Contractor will establish a regulated area where lead may be impacted and/or disturbed. Only authorized personnel may enter the regulated area. All persons entering the regulated

area will be supplied with and required to wear appropriate personal protective equipment and respiratory protection.

B. Warning signs will be posted at the entrance to each regulated area. The sign will read as follows:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING
AUTHORIZED PERSONNEL ONLY

3.2 CAL OSHA COMPLAINCE

A. All Contractors/employers whose employees may impact or perform trigger activity associated with lead-based paint or lead containing materials shall comply with the requirements, standards and work practices codified by Cal OSHA lead construction standard per CCR Title 8 § 1532.1. Each Contractor/employer shall:

1. Make an assessment as to the applicability of the Cal OSHA lead construction standard relative their specific work. Cal OSHA standards are designed to regulate and enforce on-the-job worker safety. Employers are required by law to ensure that employees are not exposed to airborne lead levels which exceed the permissible exposure limit (PEL). The standard requires worker exposure monitoring, medical surveillance, training, special work practices, etc.

2. Contractors/employers whose employees will be working on this project are required to assess lead exposure risk to their employees (as per Cal OSHA lead standard CCR Title 8 § 1532.1). In making this evaluation, contractors should:

   a. Review all lead related documents and reports.

   b. Become familiar and comply with Cal OSHA and other applicable lead regulations.

   c. Make an assessment to determine potential worker exposure relative to the various lead-related construction work to be performed.

   d. Collect supplemental data/samples if necessary.

   e. Assess and monitor worker lead exposure levels during the performance of lead trigger tasks or other activities that may potentially expose workers to levels above the Cal OSHA permissible exposure level.

   f. Determine compliance requirement relative to DOSH notification rules.

3. Cal OSHA requires compliance with their lead construction regulation when:

   a. The permissible exposure limit (PEL) will or may be exceeded. The PEL is an exposure to airborne lead dust of 50 micrograms of lead per cubic meter of air (50 $\mu g/m^3$) over an 8 hour time weighted average (TWA).

   b. Employees perform “trigger activities” that impact a material containing lead in any detectable amount. Cal OSHA mandates that an employer assume the PEL will be exceeded when his/her employees conduct "trigger activities" involving lead.

	Trigger Activity
Level 1	• Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.
Level 2	• Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean-up of dry abrasive blast residue.
Level 3	• Abrasive blasting • Welding • Cutting • Torch burning.

4. If Cal OSHA lead compliance is required, contractor(s) shall adhere with the following requirements:

   a. Construct Project Hygiene Facilities and implement decontamination policies in accordance with the Cal OSHA lead construction standard. Worker decontamination station shall be provided at all locations where worker enter or exit the work area. The decon station shall be placed at the most strategic location to allow easy worker access. The Contractor must install a filtering system for removing contaminants from the drained water. The system must have as a two stage cascading filtering system capable of filtering down to 5 µm or smaller. Filtered water may then be disposed of into the sanitary sewer. The Contractor shall maintain a supply of filters for the filtering system. The filters will be changed as often as needed to prevent the system from clogging.

   b. Determine if any employee may be exposed to lead at or above the action level (30 mg/m^3). This assessment is made by taking at least one full shift personal air sample for each job classification.

   c. Until an exposure assessment is made, any employee performing a trigger activity, shall be treated as if exposed above the personal exposure limit (PEL, 50 mg/m^3).

   d. Until an exposure assessment is performed, the employer must implement employee protective measures per Cal OSHA - CCR Title 8 § 1532.1 including:

      - Appropriate respiratory protection
      - Appropriate personal protective clothing and equipment
      - Appropriate change areas
      - Appropriate hand wash facilities
      - Biological monitoring (blood testing)
      - Appropriate training

   e. Implement engineering controls and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead at or below the PEL or to the lowest feasible level. If engineering controls can not reduce exposures below the PEL, supplement controls with appropriate respiratory protection.

f. Prior to the job, establish and implement a written compliance program to ensure that no employee is exposed to lead above the PEL. The program must address the specific issues outlined in Cal OSHA - CCR Title 8 § 1532.1.

g. Respirator use is required when:

- Employee exposure exceeds the PEL
- Employee requests it
- During the initial exposure assessment

h. If required, implement a respiratory protection program addressing the specific elements outlined in the OSHA respiratory protection standard (CCR Subchapter 7. General Industry Safety Orders § 5144).

i. If required, implement a medical surveillance program for employees exposed on any day to lead at or above the action level. The medical surveillance program must address the specific elements in the standard including (but not limited to):

- Initial medical surveillance consisting of biological monitoring (blood testing) and analysis for lead and zinc protoporphyrin levels.
- Employee notification of blood test results.
- Medical examinations and consultation under certain circumstances.

j. Post appropriate warning signs (as prescribed in the standard) in each regulated area or work area where an employee's exposure to lead is above the PEL.

k. The employer must establish and maintain an accurate record of:

- Exposure assessment data
- Medical surveillance data
- Observation procedures

l. Contractors/Employers whose employees disturbs more that 100 sq ft of lead-based paint (LBP) are required to submit written notification to Cal OHSA (per Health and Safety Code, Title 17 CCR Section 36000 (c)). The Cal OSHA LBP notification rule under requires 24-hour advance notice prior to LBP disturbance.

3.3 SITE PROTECTIVE CONTROLS

A. Where containment is required to prevent migration of lead paint contaminants to another property, containment barriers shall be at least as effective at protecting human health and the environment as those contained in HUD's Guideline for the Evaluation and Control of Lead-Based Paint Hazards in Housing and Lead Paint Removal Guide published by the Steel Structure Painting Council.

C. General Dust Controls: Implement engineering controls as necessary to reduce airborne exposures to lead to the greatest extent possible. Engineering controls shall include but not necessarily be limited to:

1. Misting of the work area as necessary to eliminate visible emissions beyond the regulated area during active demolition.

2. Collect all lead debris and lead contaminated waste for proper waste profiling, packaging, labeling, and disposal.

3. Power tools used for lead-paint removal (if performed) shall be equipped with attached HEPA vacuums to collect lead dust emissions generated by the power tool(s).

4. Install worker decontamination facilities immediately adjacent to the work area entry/exit.

5. If any of the containment systems are damaged in any way, repairs will be made immediately.

3.4 METHODS OF COMPLIANCE

A. The following work practices shall be used to reduce employee and environmental exposure during any/all work were exposure to lead could potentially exceed Cal OSHA's action level:

1) Wet removal of lead-containing materials.

2) Routine clean-up of loose lead containing debris.

3) Use of vacuum cleaners and Local exhaust ventilation machines equipped with high efficiency particulate air (HEPA) filters.

4) A containment system to control disbursement of leaded dust and debris.

3.5 CONTAMINATION

Should lead be detected outside of the regulated work area at or above 30 mg/m^3 or in excess of baseline air sample or dust wipe levels, the area will be considered contaminated. The areas outside the work area will be HEPA vacuumed and wet wiped with a trisodium phosphate solution until clearance or baseline levels are achieved.

3.6 PERSONELL AND EQUIPMENT DECONTAMINATION PROCEDURES

A. When exiting the lead regulated the work area, workers will remove gross contamination with a HEPA vacuum and dispose of work garments in a provided waste container dedicated for the disposal of lead-contaminated items. Workers will then proceed to a decontamination station equipped, at a minimum with running water, soap and disposable towels will be provided. All personnel exposed or potentially exposed to lead will be required to use the wash station at the beginning of each break, before lunch, and at the end of each shift to clean hands and face.

B. All tools, equipment, and non-disposable items used inside the work area shall be completely decontaminated before removal from the regulated area. Decontamination shall be accomplished by HEPA vacuum (when possible) and wet wiping with a mild detergent and water solution.

C. 3-Stage Decontamination Facility shall be provided IF workers are shown to be exposed at levels exceeding the permissible exposure limit.

1. A 3-stage decontamination facility equipped with a shower unit (equipped with hot and cold running water) shall be constructed for any/all work where lead exposures are expected to exceed the PEL.

2. The decontamination facility and decontamination procedures may be down-graded to a hand wash facility once (if) personal air monitoring data show all work activities generate lead exposures below the PEL.

3. Worker decontamination station shall be provided at all locations where worker enter or exit the work area. The decon station shall be placed at the most strategic location to allow easy worker access

    a. The 3-stage decontamination facility shall consist of the following

        • Clean Room: The clean room will be sized to accommodate the size of the work crew. If lockers are not available storage of the workers personal equipment and street clothing, the contractor may use plastic bags. The contractor must keep the change area clean and dry. Do not allow shower overflow water in the change room. Damp wipe all surfaces twice after each shift with a disinfectant.

        • Shower Room: The shower room shall be constructed with a minimum of a single shower or what ever is adequate for the size of the work crew. Each shower head shall be supplied with hot and cold water. The shower shall be constructed to prevent leakage.

            - Install a totally submersible waterproof sump pump with a integral float switch inside the collection water pan. Provide sump pump size to pump twice the flow capacity of all showers or hoses supplying the water to the sump. Install a sump capable of pumping debris, sand, plaster or other materials which may wash off during decontamination procedures.

            - The contractor must install a filtering system for removing contaminants from the drained water. The system must have as a two stage cascading filtering system capable of filtering down to **5 µm or smaller.** Filtered water may then be disposed of into the sanitary sewer.

            - The contractor shall maintain a supply of filters for the filtering system. The filters will be changed as often as needed to prevent the system from clogging.

        • Equipment/Dirty Room: The equipment room will be used for storage of tools and equipment. Workers will remove dirty protective clothing in this space.

4. Each room of the decontamination unit will shall be constructed of materials that are leak-tight and air-tight. Each room shall be connected in succession separated by 6 mil polyethylene air locks. Access between any two rooms in the decontamination unit will be through air locks with at least 3 feet separating each curtained door way.

5. Require all workers to adhere to the following personal decontamination procedures whenever they leave the work area. Upon entering the asbestos abatement project, **remove street cloths** in the clean change room and put on a respirator and clean protective clothing before entering the equipment room or work area. Before exiting the work area, the following procedures are required;

    a. Remove gross contamination from clothing with a HEPA vacuum.

    b. Proceed to the equipment room and remove all clothing except the respirator.

c. Deposit contaminated clothing in labeled disposal container.

d. Still wearing the respirator, proceed to the shower and clean the outside of the respirator with soap and water while showering.

e. Remove respirator.

f. Thoroughly wash and shampoo hair and body.

g. Remove filters from respirator, if breathing has becomes restricted or as often as the user feels is needful. Dispose of the filter elements in the container supplied for this purpose.

h. Wash and rinse the inside of the respirator.

i. Following showering and drying off, proceed directly to the clean change room and put on street cloths

j. Contaminated footwear shall be stored in the equipment room or disposed of as contaminated waste or cleaned thoroughly inside and out using soap and water before removing from the shower area.

3.7 DAILY AND FINAL CELANING OF LEAD WORK AREAS

A. Contractor shall ensure that lead work areas undergo daily and final cleaning.

B. Contractor shall conduct work area cleaning as follows:

1. Work area cleaning shall begin with a thorough HEPA vacuuming of all surfaces, starting at the ceilings, proceeding down the walls and including window, doors and door trim and floor. The floor shall be vacuumed last, beginning at the farthest corners from the entrance to the work area.

2. Contractor shall next wash or mop the same surfaces with a tri- sodium phosphate (TSP) detergent solution (five percent) or other equally effective cleaning agent and allow surfaces to dry.

3. After TSP wash and dry cycle, HEPA vacuuming shall again be performed as noted above

3.8 PROJECT CLEARANCE

A. The project shall not be deemed complete until the Contractor performs a final cleaning of the work area(s). Completion of the project will be determined by the Owner's representative during a visual inspection of the work area(s).

B. Completion of the project may also be determined by the results of post clean dust and/or soil samples. At the Owners option, final wet wipe and/or soil samples may be collected and analyzed for lead content to establish conformity to clearance criteria. To be deemed acceptable, wipe samples must pass the clearance standards established by the U.S. EPA and CDPH.

C. Should Contractor fail a visual inspection or fail to pass the testing criteria, Contractor shall reclean areas as directed by the Owner's representative. Contractor shall perform all

recleaning at Contractors own expense.

3.9 WASTE CHARACTERIZATION, DISPOSAL AND MANIFESTING PROCEOURES

A. All lead and lead-contaminated debris shall be collected and kept separate from all/any non-lead waste. Laboratory costs associated with analyses required for disposal, will be at the Contractor's expense. Lead-waste streams shall be tested to characterize hazard levels as follows:

Test 1 - California : SW846, Total Threshold Limit Concentration (TTLC)

If: TTLC is less than 50 mg/kg STOP testing - classify as non-hazardous waste.

If: TTLC is greater than 50 mg/kg but less than 1000 mg/kg perform test 2 to determine Cal-Haz status.

Test 2 - California : Waste Extraction Test (WET), Soluble Threshold Limit Concentration (STLC)

If: STLC is less than 5 mg/l - classify as a Non Hazardous Waste.

If: STLC is greater than 5 mg/l AND TTLC is greater than 100 – perform test 3 to determine RCRA requirements - classify as a California Hazardous Waste or RCRA Waste (pending TCLP)

Test 3 - Federal : Soluble Threshold Limit Concentration (TCLP)

If: TCLP is less than 5 mg/l - classify as non-RCRA waste.

If: TCLP is greater than 5 mg/l - classify as RCRA waste, stabilize waste.

B. The contractor shall be responsible for the proper storage, packaging, labeling, manifesting, transportation, and disposal of lead containing and lead hazardous materials.

C. Packing, labeling, transporting, and disposing of hazardous waste shall comply with Cal-EPA regulations under 22 CCR, including completion of the Uniform Hazardous Waste Manifest Form (OTSC 8022A and EPA 8700-22).

D. Segregate, containerize, and characterize construction debris including rags, protective coveralls, polyethylene sheeting, and other consumable items. Waste will be packaged in accordance with the applicable U.S. Department of Transportation regulations included in 49 CFR Parts 173, 178, and 179.

E. A "Waste Manifest" will be completed for disposal of hazardous waste. The Hazardous waste transporter will possess a valid EPA Transporter ID number. The Contractor's Supervisor will notify the Owner's Inspector at least 48 hours before the time that the Manifest is required to be signed by the Owner.

F. Warning labels will be affixed to all waste containers that contain lead wastes in concentrations considered hazardous. The labels will conform to RCRA, DOT, and DTSC guidelines.

G. Any lead contaminated water generated during the work for decontamination purposes will be filtered to 5 µm and drummed. If TTLC/STLC testing can prove that the water is non-hazardous, it will be discharged into the sanitary sewer system (pending approval from the local PUC). If the water is shown as hazardous per TTLC/STLC testing, it will be disposed as such.

PART 4 - DEFINITIONS

A. Aerosol: A system consisting or particles, solid or liquid, suspended in air.

B. Air Monitoring: The process of measuring the lead content of a specific volume air.

C AL: Action level - employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 mg/m3) calculated as an 8-hour time-weighted average (TWA).

D. Authorized Visitor: The Owner, Owner's Representative, testing lab personnel, emergency personnel or a representative of any federal, state, and local regulatory or other agency having authority over the project.

E. Barrier: Impermeable membrane (e.g. Plastic) that captures, hold, or otherwise contains and inhibit the movement of dust.

F. Blood Lead Monitoring: Each worker potentially exposed to hazardous levels of lead must routinely give a blood sample which is to be tested for lead.

G. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.

H. CDPH: California Department of Public Health previously known as California Department of Health Services (DHS).

I. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.

J. Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

K. Daily and Final Clean up: Process includes thorough HEPA vacuuming of all surfaces next wash or mop the same surfaces with a tri- sodium phosphate (TSP) detergent solution (five percent) or other equally effective cleaning agent and allow surfaces to dry. Then a second HEPA Vacuuming.

L. Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.

M. Disposal Bag: A properly labeled leak-tight, 6-mil thick leak-tight plastic bag used for transporting lead waste from work area to disposal site.

N. DHS: California Department of Health Services – now known as California Department of Public Health (CDPH).

O. EBL: Elevated Blood-lead Level. For adult workers, OSHA set 40 micrograms of lead per deciliter of blood, and NIOSH set 25 micrograms per deciliter.

P. Final Clean up: A minimum of a HEPA-vacuuming, wet wiping and a second HEPA-vacuuming is required. This procedure is repeated until area passes final inspection.

Q. Final Inspection: After the final clean up is complete, the final inspection takes place which consists of the post-construction visual inspection.

R. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of airborne material greater than 0.3 microns in diameter.

S. HEPA Filter Vacuum Collection Equipment (or Vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining lead dust. Filters should be 99.97% efficient for retaining particles greater that 0.3 microns in diameter.

T. High-efficiency particulate air filter: (HEPA) refers to a filtering system capable of trapping and retaining 99.9% of all monodispersed particles 0.3 microns in diameter or larger.

U. HUD: U. S. Department of Housing and Urban Development. Responsible for the Lead-Based Paint Guidelines for the Public and Indian Housing Authorities.

V. LBP: Lead-Based Paint. Coating containing lead in concentrations at or above 1 milligrams of lead per square centimeter (mg/cm^2), 5000 ppm, or ,5% weight percent.

W. LCP: Lead-Containing Paint. Coating containing detectable amounts of lead on concentrations below 1 milligrams of lead per square centimeter (mg/cm^2), 5000 ppm, or ,5% weight percent.

X. Lead: metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

Y. Medical Removal: An employee must be removed from any job with lead exposure. When the employees blood level levels reach certain regulator levels prescribed by Cal OSHA.

Z. Micrograms: Is one millionth of a gram. This is used for reporting lead concentrations in wipe samples (micrograms per square foot) and blood level (micrograms per deciliter).

AA. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

BB. Negative Pressure Ventilation System: A differential and ventilation system used to reduce atmospheric pressure within the work area relative to areas outside the work area.

CC. NIOSH: National Institute of Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services or designee.

DD. Owner's Representative: The Owner's Representative will represent the Owner during construction. The Owner's Representative will advise and consult with the Owner. The owner's instructors to the Contractor will be forwarded through the Owner's Representative.

EE. PEL: Permissible exposure limit - employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (50

mg/m3) calculated as an 8-hour time-weighted average (TWA).

FF. Personal Monitoring: Sampling of the lead concentrations within the breathing zone of an employee.

GG. Post-construction Visual Inspection: Inspector insures that lead-related construction work has been completed.

HH. Protection Factor: The ratio of the ambient concentration of an airborne substance tot he concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

II. Respirator: A device designed to protect the wearer form the inhalation of harmful atmospheres.

JJ. Supervisor: one who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them. Supervisors shall be trained, as required by Cal OSHA, and, when required, be CDPH certified.

KK. Time Weighted Average (TWA): The average concentration of a contaminant air during a specific time period.

LL. TSP: Trisodium Phosphate. Contractor may elect to use an equivalent Detergent.

MM. Visible Emissions: Any emissions containing particulate material that are visually detectable with the aid of instruments. This does not include condensed uncombined water vapor.

NN. Wet Cleaning: The process of reducing lead dust contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with water in a minimum of 5% TSP solution (or equivalent detergent). Wash water should be changed frequently. Dry sweeping is prohibited. Dispose of all cleaning materials in an appropriate manner.

OO. Wipe Sample: A commercial wipe pre-moistened with a non-alcohol wetting agent is used to clean a set surface area, usually one square foot, to test for lead. These are taken mostly during the Pilot Project and during the Final Inspection.

PP. Work Area: The area where lead-related activities are performed which is defined and/or isolated to prevent the spread of lead dust or debris, and entry by unauthorized personnel.

ProTech
Consulting & Engineering

APPENDIX 2

ProTech
Consulting & Engineering

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Survey Report

Pre-Demolition Survey & Evaluation

• Asbestos Containing Materials (ACM) •
• Lead-Based Paint (LBP) •

Revised: **August 16, 2023** **Project No.:** 151-MA23ed.gk

Client	**Group 4 Architecture, Research and Planning** 211 Lind Avenue South San Francisco, CA 94008
Project	**Santa Rosa Hearn Community Campus** 967 & 980 Hern Avenue Santa Rosa, California
Service Areas	***967 Hearn Avenue:*** - 1 single family residential structure - Several out-buildings ***980/1004 Hearn Avenue:*** - 2 single family residential structures - Several out-buildings
Project Description	ProTech conducted a limited environmental consulting services to assess conditions associated with asbestos-containing materials (ACM) and lead-based paint (LBP). Consulting services were requested to obtain regulatory compliance data prior to demolition of the project.

Report Attachments:
1) PLM laboratory report
2) AAS laboratory report
3) XRF report

Introduction

On April 13, 2023, **ProTech Consulting & Engineering, Inc.** performed a building survey to identify asbestos-containing materials (ACM) and lead-based paint (LBP) at the subject project. The survey was conducted in an effort to comply with pre-demolition/renovation regulatory requirements. The services provided by ProTech were limited to the specific areas, items, tasks, and analytes described herein. No other services are intended or implied.

Survey Exclusions

1. 980 – Debris and unsafe flooring conditions limited access throughout the house interior and attic.
2. 980 – Limited access to the crawl space.
3. 1004 – Kitchen and back left room were filled with occupant's contents limiting access.
4. 1004 – Limited access to the crawl space.

Note: *Limitations may not have allowed for comprehensive characterization of all possible suspect materials associated with the project.*

Certified Staff

Environmental consulting services were conducted by ProTech's licensed and accredited staff as follows:

Consultant	Discipline	Issuing Agency	Certification No.
Ron Mason	Asbestos IAQ	Cal OSHA EAA	96-1903 1-10-03
Emanuel Dounias	Asbestos Lead	Cal OSHA CDPH	00-2766 LRC-0003765
Bob Newman	Asbestos IAQ	Cal OSHA UC Berkeley	00-2767 10-03

Services Requested by Client

Consulting services were limited by the client to the following scope of services:

Asbestos Survey

- Performed a visual survey of the project to identify, document, and assess suspect asbestos-containing materials (ACM). Services were limited to areas and materials visibly accessible through reasonable means. Except for minor disturbance due to sampling, destructive methods and/or demolition of building components was not employed to discover hidden, inaccessible, or subsurface conditions.
- Collected representative samples to confirm or rebut the presence of ACM.
- Submitted samples to a certified laboratory for analysis by standard polarized light microscopy (PLM) to determine asbestos content.
- Assessed the friability and abatement classification of identified ACM.
- Prepared this written report presenting an evaluation and assessment of the data.

LBP Survey

- Performed a visual survey of the project to identify, document, and assess suspect lead-based paint (LBP).
- Tested painted/coated surfaces using a calibrated X-ray fluorescence analyzer (XRF).
- Collected representative conformational paint chip samples to confirm or rebut the presence of lead.
- Submitted paint chip samples to a certified laboratory for analysis by atomic absorption spectroscopy (AAS)
- Prepared this written report presenting an evaluation and assessment of the data.

Laboratory Results & Regulatory Assessment

Asbestos Bulk Sample Results

Asbestos-Containing Materials (ACM)

	Material Description	Material, System, Location	Approx. Quant.	Lab Result	Smpl Nos.	Regulatory Assessment	
						Cal OSHA	EPA/ AQMD
	976 Hearn						
1	Gray Transite shingles with building paper	Exterior walls for the house and garage	5,000 sq ft	10% Chr	**25, 26, 27**	Class 2 Abatement	Category II Non-friable
	980 Hearn						
1	Tan sheet flooring	Kitchen & pantry	400 sq ft	3% Chr	**06, 07**	Class 2 Abatement	RACM

2	Tan sheet flooring	Bathroom	75 sq ft	3% Chr	**08, 09**	Class 2 Abatement	RACM
3	Gray roof mastic	House flashing and penetrations	50 ln ft	10% Chr	**24, 25**	Class 2 Abatement	Category I Non-friable
4	Black built up roofing	Garage roof	1,000 sq ft	20% Chr	**28, 29**	Class 2 Abatement	Category I Non-friable
5	Black roof mastic	Flashing for garage	5 sq ft.	10% Chr	**30**	Class 2 Abatement	Category I Non-friable
			1004 Hearn				
1	Gray Transite flue pipes	Kitchen exhaust and right rear bedroom	2 pipes 20 ln ft.	15% Chr 5% Croc	**14**	Class 2 Abatement	Category II Non-friable
2	Black roof mastic	Patches and penetrations	50 sq ft.	10% Chr	**23, 24**	Class 2 Abatement	Category I Non-friable

Less Than 1% Asbestos Materials

(<1% asbestos PLM samples confirmed by PLM 400 point-count method)

	Material Description	Material, System, Location	Approx. Quant.	Lab Result	Smpl Nos.	Regulatory Assessment Cal OSHA	Regulatory Assessment EPA/ AQMD
			976 Hearn				
1	Textured drywall, Joint tape & joint compound	Most walls and ceilings	4500 sq ft	<1% chr by composite	**01, 02, 03, 04, 05**	Class 2 Abatement	Non-Asbestos
2	Topping texture	Most walls and ceilings	Included with item 1	<1% chr by layer	**06, 07, 08, 09,10**	Class 2 Abatement	Non-Asbestos
3	Smooth drywall, Joint tape & joint compound	Walls and ceilings for lower level front room and bathroom	1100 sq ft.	<1% chr by composite	**11, 12*, 13***	Class 2 Abatement	Non-Asbestos
			980 Hearn				
1	Smooth drywall, Joint tape & joint compound	Walls and ceilings throughout	4,000 sq ft	<1% chr by composite	**01, 02, 03, 04, 05**	Class 2 Abatement	Non-Asbestos
			1004 Hearn				
1	Smooth drywall, Joint tape & joint compound	Walls and ceilings for left rear room	500 sq ft.	<1% chr by composite	**06*, 07**	Class 2 Abatement	Non-Asbestos

Chr - Chrysotile; Amo - Amosite; Cro - Crocidolite; Tre - Tremolite; Act – Actinolite

* = No asbestos detected in this sample

Assumed Asbestos

(Suspect ACM not sampled)

	Material Description	Material, System, Location	Approx. Quant.	Regulatory Assessment Cal OSHA	Regulatory Assessment EPA/ AQMD
		976 Hearn			
1	Gray Transite, flue pipe	Above the hot water heater in laundry room	20 ln ft.	Class 2 Abatement	Category II Non-friable

No Asbestos Detected

(No asbestos was detected in the following materials)

	Material Description	Material, System, Location	Sample No.
		976 Hearn	
1	Tan baseboard, mastic	Lower level, bedroom, and laundry	16, 17
2	Gray ceramic tile mortar	Bathroom floor and tub stall	18
3	Gray, ceramic tile, mortar, and backer board	Kitchen floor	19, 20
4	Tan sheet flooring	Lower level toilet	21
5	White, smooth, drywall, joint, tape compound	Garage walls	22, 23, 24

6	Grey concrete	Slab for house and garage, walkway and patio	28, 29, 30
7	Black, composite shingle, and felt	House and garage roofs	31, 32, 33
8	Pink CMU and mortar	Patio walls	34, 35
		980 Hearn	
9	White sheet flooring	Laundry room	10, 11
10	Tan wall panel mastic	Bathroom	12, 13
11	Gray, stucco and black building paper	Exterior walls, ceilings for front porch	14, 15
12	Grey concrete	Foundation	16, 17
13	Red concrete	Front porch, walkways, exterior stairs	18, 19
14	Gray composite sheet roofing	Main roof and side entry overhang	20, 21
16	Brown, composite shingle roof, and felt	Rear roof	22, 23
17	Grey concrete	Garage Slab	26, 27
18	Gray concrete	Back garage slab	31, 32
19	Red composite shingle roof	Back garage	33, 34
20	Gray/black stucco and building paper	Shed walls (roof is metal and floor is wood)	35
		1004 Hearn	
1	White plaster with button board	Walls and ceiling throughout excluding left rear room	01, 02, 03, 04, 05
2	Tan linoleum sheet flooring	Kitchen inside entry	08, 09
3	Tan linoleum sheet flooring with pebble pattern	Left rear room	10, 11
4	Gray ceramic tile mortar with vapor barrier	Kitchen, counters and backsplash, bathroom, walls, tub and shower, enclosures, vanity	12, 13
5	Gray, stucco, and building paper	Exterior walls	15, 16
6	Brown cementicious roof tiles	Pitched roof	17, 18
7	Black roof felt	Below roof tiles	19, 20
8	Black built up roof	Flat roof in rear	21, 22
9	Gray concrete	Foundation, walkway and patio	25, 26
10	Brown composite shingle roof and felt	Garage roof	27, 28
11	Gray concrete	Garage slab	29, 30
12	Gray stucco and bldg. paper	Garage side and rear walls	31

ACM Assessment Notes

Assessment of ACMs:
ACM assessments are based on the current condition of material at the time of inspection. Category I & II non-friable materials may become friable RACM during demolition or renovation. This report does not attempt to forecast category changes to ACM based on future work on ACMs.

<1% Asbestos Drywall & Joint Compound Composite (>1% asbestos in joint compound):
PLM analysis of drywall and joint compound samples are reported as a composite value (drywall, joint compound and joint tape mixed together). EPA/AQMD allows compositing of these drywall **joint compound** systems **only**. Drywall systems that yield a result of <1% asbestos by point count method are consider non-ACM my EPA/AQMD. However, Cal OSHA does not allow composite analysis. The percentage of asbestos in the specific asbestos bearing layer is the value used to make a Cal OSHA assessment. In other words, a drywall system that is less than 1% asbestos by composite but contains greater than 1% asbestos in the joint compound **layer** is an ACM from a Cal OSHA standpoint. In this case, the sheetrock removal would still be a Cal OSHA Class II abatement operation.

Conflicting Laboratory Results:
The EPA has a specific protocol for sampling suspect asbestos building materials. In general, it recommends collecting multiple samples (often a minimum of three) of each suspect asbestos material. Multiple samples are recommended by the EPA to increase the statistical reliability of the results and to minimize the potential for field or laboratory error.

Sometimes, multiple samples representing a particular material will yield both positive and negative results. When this happens, the negative sample result(s) are superseded by the positive results. Once a single positive sample is identified, the material represented by the sampling is treated as an asbestos-containing material.

However, if additional sampling data, as-built plans, or other reliable data can adequately explain or confirm that area(s) that tested positive are different (not homogeneous) from areas that tested negative, this information can be used to quantify ACM and define the scope of an asbestos abatement job more accurately.

Lead XRF Results

Lead-Based Paint (LBP)
(1 mg/cm² or greater)

18 XRF reading were positive for LBP - (high lead)

	Description (Color, Substrate, Component)	Component	Location(s)
1	Blue and gray ceramic wall tiles	Wall tile glazing	1004 bathrooms
2	White wood door paint	Wood door components	1004 wood doors throughout
3	White wood fascia/soffit/trim paint	Wood fascia, soffit and trim	1004 house and garage exterior throughout
4	White wood window paint	Wood window components	1004 house and garage wood windows throughout
5	White metal gutter paint	Metal gutter components	1004 Throughout
6	Green wood garage door paint	Wood door components	1004 garage
7	White drywall paint	Drywall walls and ceilings	980 throughout
8	Yellow ceramic countertop tiles	Ceramic tile glazing	980 kitchen
9	White wood ceiling paint	Wood ceilings	980 ceilings above drywall
10	White wood door paint	Wood door components	980 house and shed exterior doors throughout
11	White wood paint	Wood window components	980 windows throughout

See attached XRF data for details

Some materials have multiple positive readings

Lead-Containing Paint (LCP)
(Less than 1 mg/cm²)

71 XRF reading were positive for LCP - (low lead)

See attached XRF data for details

No Lead Detected

19 XRF reading were negative for lead – (no lead detected)

Note: Cal OSAH does not accept XRF results to prove that a material is non-lead. To treat a material as non-lead in an occupation situation, paint-chip laboratory analysis is required.

See attached XRF data for details

Lead Bulk Sample Results – Paint Chips

Representative paint-chip samples were collected to confirm (or rebut) the presence of lead in materials the showed very low (or no) lead content by XRF analysis.

Lead-Based Paint (LBP)
(≥.5 wt% or ≥5,000 ppm)

	Description (Color, Substrate, Component)	Location	Sample No.	Results

No Lead based paint was detected in the paint chips collected. See XRF data for LBP components

Lead-Containing Paint (LCP)
(>0 to <.5 wt% or <5,000 ppm)

	Description (Color, Substrate, Component)	Location	Sample No.	Results
1	White drywall paint	976 Hearn	LP-02	0.022
2	Stucco paint	980 Hearn- garage	LP-04	0.018
3	Stucco paint	980 Hearn - shed	LP-05	0.011
4	White Stucco paint	1004 Hearn	LP-08	0.038

No Lead Detected				
	Description (Color, Substrate, Component)	Location	Sample No.	Results
1	White drywall paint	976 Hearn	LP-01	<0.007
2	White stucco paint	980 Hearn	LP-03	<0.007
3	White plaster paint	1004 Hearn	LP-06	<0.02
4	Orange drywall	1004 Hearn	LP-07	<0.007

Conclusions & Recommendations

Asbestos

Asbestos Results Summary

- Asbestos containing materials (ACM) were identified on this project.
- Materials containing <1% asbestos were identified on this project by polarized light microscopy (PLM) point count method. These materials are confirmed <1% by point count.
- The asbestos materials identified on this project are regulated.

See attached analytical reports

Recommendations Prior to ACM Disturbance

ACM should be properly removed by a qualified firm prior to renovation/demolition. In preparation for the removal of ACM, the following should be performed:

	Task	Task Description	Fee
1	Prepare Project Specification	Prepare a written scope of work & instructions to bidders (site plans not included).	ProTech will Price these services upon request
2	Bid Review and Contractor Selection	Select qualified contractors (prospective bidders), review bids and award contract.	
3	Project Monitoring & Oversight	Monitoring work and document contractor compliance.	
4.	Project Clearance	Perform final inspection and collect air samples to certify work area clearance.	

Lead

Lead Results Summary

- Lead-based paint (LBP) was identified on this project.
- Lead-containing paint (LCP) was identified on various components throughout the site.
- If ***trigger tasks*** are performed involving any amount of lead, employers must train, protect (w/ PPE) and assessment employee exposure.

Cal OSHA Trigger Task	Presumed Exposure	Required Respiratory Protection
Low Exposure Trigger Tasks • Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.	50-100 µm/m^3	Half-mask, air purifying

Medium Exposure Trigger Tasks • Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean-up of dry abrasive blast residue.	500-2500 µm/m^3	Full-face, air purifying, or Tight fitting PAPR, or Supplied air, contiguous flow
High exposure Trigger Tasks • Abrasive blasting • Welding • Cutting • Torch burning.	>2500 µm/m^3	Supplied air, pressure demand

See attached analytical results

Lead-Related Construction Work – Cal OSHA Requirements

- Cal OSHA worker protection rules, CDPH certification requirements, US EPA standards, and DTSC disposal requirements need to be assessed by each contractor/employer who performs work on this project.

- Contractors, whose employees work at this site, are required to assess if their work will be subject to the requirements of the Cal OSHA lead construction standard (CCR Title 8 § 1532). Cal OSHA standards are designed to regulate and enforce on-the-job worker safety. Employers are required by law to ensure that employees are not exposed to airborne lead levels which exceed the permissible exposure limit (PEL). The standard requires worker exposure monitoring, medical surveillance, training, special work practices, etc.

- Each contractor/employer who bids and/or performs work at the site will need to assess potential lead exposure to employees performing their particular scope of work. Contractors who perform work at this site may need to obtain additional data (beyond the data presented in this report) during their assessment and Cal OSHA compliance planning. Individual contractors/sub-contractors should be allowed access to the project to obtain any needed data (samples, consultation, etc.) to complete their employee exposure assessment.

- ProTech recommends that the building owner and/or general contractor disseminate this report as well as any other lead-related information to all prospective contractors bidding work at the subject site.

- Contractors, whose employees disturbs more that 100 sf of lead-based paint (LBP), are required to submit written notification to Cal OHSA (per Health and Safety Code, Title 17 CCR Section 36000 (c)). The Cal OSHA LBP notification rule requires 24-hour advance notice prior to LBP disturbance.

- Any work performed at the site where LBP or LCP is likely to be disturbed should be performed by a contractor trained and qualified to perform lead-related construction work. Any work that exceeds Cal OSHA's permissible exposure limit or is performed to remediate a lead hazard must be conducted by CDPH certified personnel. All lead related work should be conducted employing lead work practices in accordance with HUD guidelines.

Asbestos Regulatory Notes

Cal OSHA (DOSH)

Asbestos-Containing Material (ACM): A material is an asbestos containing material (ACM) when the sample aggregate or any one of its layers (analyzed individually) contains greater than 1% asbestos. Cal OSHA does **not** allow composite analysis (mixing layers of materials together).

Less than 1% Asbestos: Materials containing less than 1% asbestos are not regulated by most governmental agencies. However, Cal OSHA is not one of those agencies. The Cal OSHA asbestos standard must be followed for work involving materials that contain a concentration of asbestos as low as **0.1%.**

If a material can be shown to contain less than 1% asbestos by PLM point count (or other approved method), it can be treated as an asbestos-containing construction material (ACCM). ACCM is a term Cal OSHA uses to describe materials containing **less than 1%** (but greater than 0.1%) asbestos. In certain situations, there may be some economic advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Less than 0.1% Asbestos: If a material can be shown to contain less than **0.1%** asbestos by an approved method, it can be treated as a non-asbestos material. In certain situations, there may be some economic advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Class I Asbestos Work: Cal OSHA prescribes specific work practices involving the removal of asbestos-containing insulation and surfacing (i.e. sprayed-on) materials.

Class II Asbestos Work: Cal OSHA prescribes specific work practices involving the removal of ACM which is not insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing, cement products, and construction mastics.

EPA/AQMD

Asbestos-Containing Material (ACM): Any building material which contains commercial asbestos in an amount greater than 1%.

Less than 1% Asbestos: Materials that are found to contain less than 1% asbestos by standard polarized light microscopy (PLM) may be considered non-asbestos (by EPA/AQMD) if confirmation analysis is performed. To be treated as a non-asbestos material, the EPA and AQMD require analytical verification by PLM Point Count (or better). This verification is required because the standard PLM analysis is not sensitive enough to accurately determine asbestos content at or below 1%. In certain situations, there may be some cost advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Regulated Asbestos-Containing Material (RACM): RACM includes friable (easily crumbled) ACM, or Category I non-friable ACM that has or will become friable or that has been subjected to sanding, drilling, grinding, cutting, or abrading, or Category II non-friable ACM that may become or has become crumbled, pulverized, or reduced to powder.

Friable: Materials that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

Non-Friable: Materials that **cannot** be easily crumbled, pulverized, or reduced to powder, when dry, by hand pressure. Non-friable materials are categorized by EPA/AQMD as follows:

- *Category I Non-friable ACM:* Asbestos-containing packing, gaskets, resilient floor coverings, mastics and asphalt roofing products.
- *Category II Non-friable ACM:* Asbestos-containing material, excluding Category I non-friable asbestos-containing material, that, when dry, and in its present form, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Lead Regulatory Notes

Lead Standards

Lead Types		Analysis By	Threshold
Lead-based paint (or material)	LBP	X-ray Fluorescence Analyzer (XRF): Laboratory Analysis (Paint Chip):	- At or above **1 mg/cm²** - At or above **0.5 weight % or 5,000 ppm**

Lead containing paint (or material)	LCP	XRF: Paint Chip:	- Below **1 mg/cm²** - Below **0.5 wt % or 5,000 ppm**
No lead detected - Negative	ND	XRF: Paint Chip:	- XRF data are not used to determine ND - **<90 ppm** for Consumer Product Safety Commission - **<600 ppm** for Cal OSHA non-trigger tasks

Regulatory Oversight

Material Description	Regulatory Assessment - Governing Regulations
1. Lead-based paint components (LBP)	• Cal OSHA standards apply if LBP will be disturbed by employees/workers • CDPH standards apply of lead "abatement" is performed • DTSC requires characterization of waste and proper disposal • US EPA standards apply if LBP is disturbed in a children occupied site
2. Lead containing materials (LCM)	• Cal OSHA standards apply if LCM will be disturbed by employees • CDPH standards apply if worker exposure standards are exceeded • DTSC requires characterization of waste and proper disposal
3. No Lead Detected by XRF	• Cal OSHA standards apply unless paint chip laboratory analysis confirms non-lead
4. No Lead Detected by Paint-chip	• No regulations apply

Regulatory Applicability

California Occupational Safety & Health Administration (Cal OSHA):
• Regulates any detectable amount of lead (does not have to be LBP) when trigger tasks are performed
• Requires worker training
• Regulates employee safety during lead-related work
• Enforces proper work practices
• Requires notification when 100 sq ft (or more) of LBP is disturbed.

California Department of Public Health (CDPH):
• Regulates "abatement" of Lead-based paint
• Requires *accredited* training for workers and supervisors
• Provides certification of workers and supervisors performing abatement
• Mandates lead abatement be performed in accordance with US HUD guidelines
• Defines "abatement" as an action performed for the purpose and intent of reducing or eliminating a lead "hazard"
• Requires notification when abatement is performed

California Department of Toxic Substance Control (DTSC):
• Regulates disposal of lead waste
• Requires testing of waste stream to characterize hazard level

US Environmental Protection Agency (US EPA):
• Regulates Lead-based paint in child occupied facilities
• Regulates work involving the disturbance of as little as 6 sq ft of interior & 20 sq ft exterior LBP
• Requires *accredited* training for workers and supervisors
• Requires certification of companies performing LBP work
• Mandates minimal work practices

Cal OSHA Trigger Tasks

The following table lists the Cal OSHA trigger tasks, presumed exposure and the type of respiratory protection that is required while performing those tasks:

Cal OSHA Trigger Task	Lead Content of Impacted Material	Presumed Exposure	Required Respiratory Protection
• Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.	≥600 ppm	50-100 µm/m^3	Half-mask, air purifying
• Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean-up of dry abrasive blast residue.	≥600 ppm	500-2500 µm/m^3	Full-face, air purifying, or Tight fitting PAPR, or Supplied air, contiguous flow
• Abrasive blasting • Welding • Cutting • Torch burning.	≥600 ppm	>2500 µm/m^3	Supplied air, pressure demand

Scope & Report Limitations

- This report has been prepared for the exclusive use of ProTech's client and is not intended for use by any other party. The scope of work and results presented in this report may not be appropriate for uses by any other party. Scope of work limitations were established by the Client to include areas and items of interest and concern to the Client. ProTech is only responsible for the specific scope of work performed. No other services are intended or implied. Any use by a third party of this report shall be at their own risk and shall constitute a release and an agreement to defend and indemnify ProTech from any and all liability in connection therewith whether arising out of ProTech's negligence or otherwise.

- ProTech's environmental consulting services were limited to areas and materials visibly accessible through reasonable means. Except for minor disturbance due to sampling, destructive methods and/or demolition of building components was not employed to discover hidden, inaccessible, or subsurface conditions.

- This project may contain undiscovered suspect materials in areas that were not accessible or identified during ProTech's survey. Suspect contaminates may be discovered during demolition, renovation, or maintenance. If suspect contaminates are ever discovered, stop all work that could impact materials of concern to allow properly trained personnel to perform sampling and or removal.

- This report and it's evaluations/conclusions/assessments are based on the current condition of the project. This report does not assess or anticipate future events that may impact or damage subject materials. Future changes in the condition of materials of concern will require a new assessment by an qualified environmental consultants.

- ProTech accepts no liability for minor aesthetic damage to architectural finishes or structural damage due to sampling.

- This report is not a hazard assessment for persons or contractors performing work on the site. Each person, contractor, and/or employer who performs work on the project will need to assess their potential exposure to hazards and evaluate regulatory compliance associated with their individual scope of work.

- The quantities of subject material stated in this report are approximations. This report is not a work plan or project specification. Contractors should not rely on this document for bidding purposes.

- ProTech does not provide expert roof patching services. We strongly urge the Client to hire a licensed roofing contractor to patch and repair our sample locations. ProTech is not responsibility for possible future roof leaks.

- Reasonable efforts were made to examine below carpeted areas and resilient floor coverings to determine and quantify the presence of suspect materials. ProTech accepts no liability for additional materials or under-reporting of suspect materials which exist below other floor coverings.

- Glass fiber insulated mechanical systems were inspected as completely as possibly without destroying the integrity of the glass fiber insulation. The condition and presence or absence of asbestos associated with mechanical systems is assumed to be consistent with those areas exposed and examined during our inspection. However, ProTech does not guarantee that this is the case.

- ProTech does not represent this limited survey as a comprehensive inspection or evaluation. ProTech recommends that an expanded, comprehensive survey be conducted at this site if renovation or demolition activities are expected to impact any building materials other than those specifically addressed in this report.

The work reported in this report was limited to areas of concern to the client. This is not a comprehensive survey, inspection, or evaluation. The data presented in this report have limited application and should not be used beyond it's intended purpose.

Survey Approach

Inspection & Sample Collection

ProTech performed a survey of the project to identify suspect asbestos-containing materials (ACM) and lead-based paint (LBP). Identified materials were categorized for sampling into homogenous area for ACM and testing combinations for LBP.

Bulk Sampling of ACM & LBP: Bulk samples were collected by misting small areas with water, then cutting or scraping sample material from the substrate with a clean sampling tool. Whenever possible, samples were collected from areas previously damaged or deteriorating locations. Each suspect bulk sample was sealed in its own Zip-lock plastic container and labeled with a unique identification number. Sampling tools were individually cleaned before and after each sample was collected to avoid sample cross contamination. Decontamination was accomplished using single-use, pre-moistened cloths. No building systems, components, or structures were demolished to obtain samples of potentially hidden ACM or LBP. Sample information was recorded on ProTech's chain-of-custody form. This form accompanied the samples to the laboratory for possessing and analysis.

X-Ray Fluorescence Readings: Surface reading to identify LBP were taken using a X-Ray Fluorescence (XRF) lead paint analyzer. Three calibration readings were made before beginning the inspection. Additional calibration check readings were made at least every 4 hours and at the end of the inspection/day. **A**t least one individual XRF reading was taken on each testing combination.

Bulk Sample Analysis

Laboratory Certification: a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), Environmental Lead Laboratory Accreditation Program (ELLAP), and Environmental Laboratory Accreditation Program (ELAP) analyzed each bulk sample.

Laboratory: Samples were analyzed by SGS Forensic Laboratories of Hayward, California.

Analytical Method:
- Suspect ACM samples were analyzed by polarized light microscopy (PLM) – EPA Method 600/R-93-116
- Suspect LBP samples were analyzed by atomic absorption spectroscopy (AAS).

SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015504
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 412-151-35 - 980 Hearn Ave Santa Rose

PLM Report Number: B346334

SGSFL Job ID: 1454
Total Samples Submitted: 5
Total Samples Analyzed: 5

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
1	12657493	**Composite of ALL Layers** White Drywall Tan Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

Sample ID	Lab Number	Layer Description
2	12657494	**Composite of ALL Layers** White Drywall Tan Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015504
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 412-151-35 - 980 Hearn Ave Santa Rose

SGSFL Job ID: 1454
Total Samples Submitted: 5
Total Samples Analyzed: 5

PLM Report Number: B346334

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
3	12657495	**Composite of ALL Layers** White Drywall Tan Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	2
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

Sample ID	Lab Number	Layer Description
4	12657496	**Composite of ALL Layers** White Drywall Tan Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	2
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015504
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 412-151-35 - 980 Hearn Ave Santa Rose

PLM Report Number: B346334

SGSFL Job ID: 1454
Total Samples Submitted: 5
Total Samples Analyzed: 5

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
5	12657497	**Composite of ALL Layers** White Drywall Tan Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	1
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

Note: Point count results are reported to the nearest percent per EPA method.

Maria E. Casper

Maria Cosper, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 1%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
1	12657559	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

Sample ID	Lab Number	Layer Description
2	12657560	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
3	12657561	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

Sample ID	Lab Number	Layer Description
4	12657562	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	1
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
5	12657563	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

6 12657564 **Off-White Texture**

Point Count Results:

Number of asbestos points counted:	3
Number of non-empty points:	400
Layer percentage of entire sample:	95
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

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Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
7	12657565	**Off-White Texture**

Point Count Results:

Number of asbestos points counted:	2
Number of non-empty points:	400
Layer percentage of entire sample:	95
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

Sample ID	Lab Number	Layer Description
8	12657566	**Off-White Texture**

Point Count Results:

Number of asbestos points counted:	2
Number of non-empty points:	400
Layer percentage of entire sample:	95
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

Sample ID	Lab Number	Layer Description
9	12657567	**Off-White Texture**

Point Count Results:

Number of asbestos points counted:	4
Number of non-empty points:	400
Layer percentage of entire sample:	95
Percent asbestos in layer:	**1**

Asbestos type(s) detected: Chrysotile

Comment:

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
10	12657568	**Off-White Texture**

Point Count Results:

Number of asbestos points counted:	3
Number of non-empty points:	400
Layer percentage of entire sample:	95
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment:

Sample ID	Lab Number	Layer Description
11	12657569	**Composite of ALL Layers** White Drywall Off-White Joint Compound Drywall Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015505
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

PLM Report Number: B346338

SGSFL Job ID: 1454
Total Samples Submitted: 11
Total Samples Analyzed: 11

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description

Note: Point count results are reported to the nearest percent per EPA method.

Maria E. Casper

Maria Cosper, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 1%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N015506
Date Received: 05/31/23
Date Analyzed: 06/01/23
Date Printed: 06/01/23

Job ID/Site: 411-151-31 - 1004 Hearn Ave Santa Rosa

PLM Report Number: B346336

SGSFL Job ID: 1454
Total Samples Submitted: 1
Total Samples Analyzed: 1

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
7	12657534	**Composite of ALL Layers**
		White Drywall
		White Joint Compound
		Drywall Tape
		Off-White Joint Compound
		Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	**< 1**

Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

Note: Point count results are reported to the nearest percent per EPA method.

Maria E. Casper

Maria Cosper, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 1%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)
NVLAP Lab Code: 101459-0

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: B346336
Date Received: 04/12/23
Date Analyzed: 04/14/23
Date Printed: 04/14/23
First Reported: 04/14/23

Job ID/Site: 411-151-31 - 1004 Hearn Ave Santa Rosa

Date(s) Collected:

SGSFL Job ID: 1454
Total Samples Submitted: 31
Total Samples Analyzed: 31

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
1	12657528						
Layer: White Drywall			**ND**				
Layer: Off-White Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %)		**Asbestos (ND)**					
2	12657529						
Layer: White Drywall			**ND**				
Layer: Off-White Plaster			**ND**				
Layer: Pink Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %)		**Asbestos (ND)**					
3	12657530						
Layer: White Drywall			**ND**				
Layer: Off-White Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %)		**Asbestos (ND)**					
4	12657531						
Layer: White Drywall			**ND**				
Layer: White Plaster			**ND**				
Layer: Green Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %)		**Asbestos (ND)**					
5	12657532						
Layer: White Drywall			**ND**				
Layer: Off-White Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %)		**Asbestos (ND)**					

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Report Number: B346336

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
6	12657533						
Layer: Beige Drywall			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Drywall Tape			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
7	12657534						
Layer: White Drywall			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
8	12657535						
Layer: Beige Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
9	12657536						
Layer: Beige Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
10	12657537						
Layer: Beige Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Layer: Silver Coating			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
11	12657538						
Layer: Beige Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Layer: Silver Coating			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
12	12657539						
Layer: White Ceramic Tile Mortar			**ND**				
Layer: Grey Ceramic Tile Grout			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							

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Report Number: B346336

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
13	12657540						
Layer: White Ceramic Tile Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
14	12657541						
Layer: Grey Cementitious Material		Chrysotile	**15 %**	Crocidolite	**5 %**		
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (20%)**					
15	12657542						
Layer: Grey Cementitious Material			**ND**				
Layer: White Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
16	12657543						
Layer: Grey Cementitious Material			**ND**				
Layer: White Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
17	12657544						
Layer: Red-Brown Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
18	12657545						
Layer: Red-Brown Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
19	12657546						
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (65 %)		**Asbestos (ND)**					
20	12657547						
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (65 %)		**Asbestos (ND)**					
21	12657548						
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Fibrous Glass (45 %)		**Asbestos (ND)**					

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Report Number: B346336

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
22	12657549						
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Fibrous Glass (45 %)		**Asbestos (ND)**					
23	12657550						
Layer: Black Semi-Fibrous Mastic		Chrysotile	**10 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (10%)**					
24	12657551						
Layer: Black Semi-Fibrous Mastic		Chrysotile	**10 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (10%)**					
25	12657552						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
26	12657553						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
27	12657554						
Layer: Black Roof Shingle			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
28	12657555						
Layer: Black Roof Shingle			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
29	12657556						
Layer: Off-White Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
30	12657557						
Layer: Beige Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
31	12657558						
Layer: Grey Cementitious Material			**ND**				
Layer: White Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Report Number: B346336

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)
NVLAP Lab Code: 101459-0

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: B346338
Date Received: 04/12/23
Date Analyzed: 04/13/23
Date Printed: 04/13/23
First Reported: 04/13/23

Job ID/Site: 411-151-35 - 976 Hearn Ave Santa Rose

Date(s) Collected:

SGSFL Job ID: 1454
Total Samples Submitted: 35
Total Samples Analyzed: 35

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
1	12657559						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
2	12657560						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
3	12657561						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
4	12657562						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							

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Report Number: B346338

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/13/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
5	12657563						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %) Fibrous Glass (10 %)		**Asbestos (Trace)**					
6	12657564						
Layer: Off-White Texture		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (2%)**					
7	12657565						
Layer: Off-White Texture		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (2%)**					
8	12657566						
Layer: Off-White Texture		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (2%)**					
9	12657567						
Layer: Off-White Texture		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (2%)**					
10	12657568						
Layer: Off-White Texture		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (2%)**					
11	12657569						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Drywall Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %) Fibrous Glass (10 %)		**Asbestos (Trace)**					

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
12	12657570						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
13	12657571						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
14	12657572						
Layer: Red-Brown Tile		Chrysotile	**5 %**				
Layer: Black Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (5%)**					
15	12657573						
Layer: Red-Brown Tile		Chrysotile	**5 %**				
Layer: Black Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (5%)**					
16	12657574						
Layer: Brown Non-Fibrous Material			**ND**				
Layer: Tan Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
17	12657575						
Layer: Brown Non-Fibrous Material			**ND**				
Layer: Tan Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
18	12657576						
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
19	12657577						
Layer: Grey Mortar			**ND**				
Layer: Grey Semi-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (25 %)		**Asbestos (ND)**					

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
20	12657578						
Layer: Grey Mortar			**ND**				
Layer: Grey Semi-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (25 %)							
21	12657579						
Layer: Tan Sheet Flooring			**ND**				
Layer: Black Fibrous Backing			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
22	12657580						
Layer: White Drywall			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Drywall Tape			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
23	12657581						
Layer: White Drywall			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Drywall Tape			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
24	12657582						
Layer: White Drywall			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Drywall Tape			**ND**				
Layer: White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
25	12657583						
Layer: Grey Semi-Fibrous Material		Chrysotile	**10 %**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (8%)**					
Cellulose (15 %)							
26	12657584						
Layer: Grey Semi-Fibrous Material		Chrysotile	**10 %**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (8%)**					
Cellulose (15 %)							

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
27	12657585						
Layer: Grey Semi-Fibrous Material		Chrysotile	**10 %**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (15 %)		**Asbestos (8%)**					
28	12657586						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
29	12657587						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
30	12657588						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
31	12657589						
Layer: Black Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
32	12657590						
Layer: Black Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
33	12657591						
Layer: Black Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
34	12657592						
Layer: Pink Cementitious Material			**ND**				
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
35	12657593						
Layer: Pink Cementitious Material			**ND**				
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Report Number: B346338

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/13/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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SGS FORENSIC LABORATORIES

Final Report

Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)
NVLAP Lab Code: 101459-0

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: B346334
Date Received: 04/12/23
Date Analyzed: 04/14/23
Date Printed: 04/14/23
First Reported: 04/14/23

Job ID/Site: 412-151-35 - 980 Hearn Ave Santa Rose

Date(s) Collected:

SGSFL Job ID: 1454
Total Samples Submitted: 35
Total Samples Analyzed: 35

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
1	12657493						
Layer: White Drywall			**ND**				
Layer: Tan Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
2	12657494						
Layer: White Drywall			**ND**				
Layer: Tan Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
3	12657495						
Layer: White Drywall			**ND**				
Layer: Tan Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
4	12657496						
Layer: White Drywall			**ND**				
Layer: Tan Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
5	12657497						
Layer: White Drywall			**ND**				
Layer: Tan Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							

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Report Number: B346334

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
6	12657498						
Layer: Tan Sheet Flooring		Chrysotile	**3 %**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (60 %)							
7	12657499						
Layer: Tan Sheet Flooring		Chrysotile	**3 %**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (60 %)							
8	12657500						
Layer: Tan Sheet Flooring		Chrysotile	**3 %**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (60 %)							
9	12657501						
Layer: Tan Sheet Flooring		Chrysotile	**3 %**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (60 %)							
10	12657502						
Layer: Off-White Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
11	12657503						
Layer: Off-White Sheet Flooring			**ND**				
Layer: Fibrous Backing			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
12	12657504						
Layer: Tan Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							
13	12657505						
Layer: Tan Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							
14	12657506						
Layer: Grey Cementitious Material			**ND**				
Layer: Off-White Texture			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							

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Report Number: B346334

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
15	12657507						
Layer: Grey Cementitious Material			**ND**				
Layer: Off-White Texture			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
16	12657508						
Layer: Grey Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
17	12657509						
Layer: Grey Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
18	12657510						
Layer: Red Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
19	12657511						
Layer: Red Cementitious Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
20	12657512						
Layer: White Roof Shingle			**ND**				
Layer: Tan Roof Shingle			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
21	12657513						
Layer: White Roof Shingle			**ND**				
Layer: White Roof Shingle			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
22	12657514						
Layer: Multicolored Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					

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Report Number: B346334

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
23	12657515						
Layer: White Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Layer: Silver Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
24	12657516						
Layer: Black Mastic		Chrysotile	**10 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (10%)**					
25	12657517						
Layer: Black Mastic		Chrysotile	**10 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (10%)**					
26	12657518						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
27	12657519						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
28	12657520						
Layer: Black Tar			**ND**				
Layer: Black Felt		Chrysotile	**20 %**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %) Comment: Bulk complex sample.		**Asbestos (4%)**					
29	12657521						
Layer: Black Tar			**ND**				
Layer: Black Felt		Chrysotile	**20 %**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %) Comment: Bulk complex sample.		**Asbestos (4%)**					

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Report Number: B346334

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 04/14/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
30	12657522						
Layer: Black Mastic		Chrysotile	**10 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (10%)**					
31	12657523						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
32	12657524						
Layer: Grey Cementitious Material			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
33	12657525						
Layer: Red-Brown Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
34	12657526						
Layer: Red-Brown Roof Shingle			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (55 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
35	12657527						
Layer: Grey Cementitious Material			**ND**				
Layer: Off-White Texture			**ND**				
Layer: Black Felt			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

Tad Thrower

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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Job # 051-MA23
P.O. # 411-151-08

General Information

Date: 04-11-23
Job ID: 976-1004 Hearn Ave
Santa Rosa

Collected By: ED
Lab: EASI

Analysis Requested

- ☐ PCM NIOSH 7400
- ☐ TEM
  - ○ AHERA
  - ○ Level 2
  - ○ Bulk Quantitative
  - ○ Bulk Qualitative
- ☐ PLM BULK - EPA/600/R/116
- ☒ Lead
  - ◉ AA
  - ○ TTLC
  - ○ STLC
  - ○ TCLP
- ☐ Mold
- ☐ Other

Turn Around Time

- ☐ Rush
- ☐ 12 hours
- ☒ 24 hours
- ☐ 48 hours
- ☐ 3-5 days
- ☐ _____

Special Instructions

☐ Prior Positive

Filter Type: ☐ MCE, 0.8 µm, 25mm ☐ MCE, 0.45µm, 25mm ☐ MCE, 0.8µm, 37mm ☐ Other _____

Sample #	Sample Type	Sample Protocol	Location / Activity / Material Description	Time On/Off	LPM	Total Min. / Total Vol. Fibers/Fields	Results
# LP-01	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	976 White Drywall Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-02	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	976 White Drywall Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-03	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	980 White Stucco Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-04	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	980 Garage Stucco Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-05	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	980 Shed Stucco Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-06	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	1004 ~~Plaster~~ White Plaster Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-07	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	1004 Orange drywall Paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# LP-08	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	1004 White Stucco paint	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		

CHAIN OF CUSTODY

Relinquished By:	Date/Time	Received By:	Date/Time
		RECEIVED APR 12 2023 BY	1/0 201 PM

C02460

WHITE - RETAIN WITH SAMPLES CANARY - FILE COPY

SGS FORENSIC LABORATORIES

Metals Analysis of Paints

(AIHA-LAP, LLC Accreditation, Lab ID #101762)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: M249873
Date Received: 04/12/23
Date Analyzed: 04/13/23
Date Printed: 04/13/23
First Reported: 04/13/23

Job ID / Site: 411-151-08 - 976-1004 Hearn Ave Santa Rosa
Date(s) Collected:

SGSFL Job ID: 1454
Total Samples Submitted: 8
Total Samples Analyzed: 8

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference
LP-01	30919749	Pb	< 0.007	wt%	0.007	EPA 3050B/7000B
LP-02	30919750	Pb	0.022	wt%	0.007	EPA 3050B/7000B
LP-03	30919751	Pb	< 0.007	wt%	0.007	EPA 3050B/7000B
LP-04	30919752	Pb	0.018	wt%	0.007	EPA 3050B/7000B
LP-05	30919753	Pb	0.011	wt%	0.006	EPA 3050B/7000B
LP-06	30919754	Pb	< 0.02	wt%	0.02	EPA 3050B/7000B
LP-07	30919755	Pb	< 0.007	wt%	0.007	EPA 3050B/7000B
LP-08	30919756	Pb	0.038	wt%	0.007	EPA 3050B/7000B

* The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.

Kevin Poon

Kevin Poon, Laboratory Supervisor, Hayward Laboratory

Note* Sampling data used in this report was provided by the client as noted on the associated chain of custody form.

3777 Depot road, Suite 409, Hayward, CA 94545 | Phone: 510.887.8828 / 800.827.3274 Fax: 510.887.4218 | https://falaboratories.sgs.com

LEGEND

HOW TO READ THE REPORT

Wall A, is the front wall of the building.
Walls B, C and D go clockwise around the building or room

REPORTS

Detailed Report—Gives all readings by room and component.

Summary—Gives a breakdown of positive and negative readings on each combination of rooms, structures and substrates.

Distribution Report—Gives a breakdown of results by components.

PAINT CONDITION

I=Intact

F=Fair

P=Poor

Comments

There were 117 readings taken, including calibrations, using the Viken detection Pb200i XRF instrument. 18 of the readings registered at or above the action level of 1.0mg/cm2. A contractor practicing Lead Safe Practices should do any repairs or repainting of the actionable areas.

" A copy of this summary report must be provided to new lessees and purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards."

Emanuel Dounias
DPH 3765

April 12, 2023
Date

Distribution XRF Readings

ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063

INSPECTION SITE:	976/980/1004 Hearn Ave. Santa Rosa, CA
INSPECTION DATE:	4/11/2023 - 4/11/2023
REPORT NUMBER:	151-23
INSTRUMENT TYPE:	Viken Detection Pb200i XRF Lead Paint Analyzer 3112
ACTION LEVEL:	1.0 mg/cm²
STATEMENT:	Readings were performed using the Viken Dectection Pb200i.

Distribution XRF Readings

Inspection Date: 4/11/2023 - 4/11/2023
Report Date: 04/12/2023
Abatement Level: 1.0 mg/cm²
Report Number: 151-23
Total Reading Sets: 111
Job Started: 04/11/2023 11:03:56
Job Ended: 04/11/2023 14:52:23

Inspection Site: 976/980/1004 Hearn Ave.
Santa Rosa, CA

		----- Structure Distribution -----	
-->Member	**Total**	**Positive**	**Negative**
Metal	5	0 <0%>	5 <100%>
Stucco	1	0 <0%>	1 <100%>
Wood	19	4 <21%>	15 <79%>
bathroom Ceramic	2	2 <100%>	0 <0%>
Casing Wood	16	4 <25%>	12 <75%>
Ceiling Wood	1	1 <100%>	0 <0%>
counter top Ceramic	2	2 <100%>	0 <0%>
Floor Ceramic	2	0 <0%>	2 <100%>
Floor Concrete	1	0 <0%>	1 <100%>
Frame Wood	3	1 <33%>	2 <67%>
gutter Metal	2	1 <50%>	1 <50%>
Mantle Wood	1	0 <0%>	1 <100%>
Sash Wood	7	0 <0%>	7 <100%>
Shower Ceramic	1	0 <0%>	1 <100%>
Sill Wood	6	2 <33%>	4 <67%>
Wall Drywall	10	1 <10%>	9 <90%>
Wall Metal	2	0 <0%>	2 <100%>
Wall Plaster	7	0 <0%>	7 <100%>
Wall Stucco	14	0 <0%>	14 <100%>
Wall Transite	4	0 <0%>	4 <100%>
Wall Wood	5	0 <0%>	5 <100%>
Inspection Totals:	**111**	**18**	**93**

Distribution XRF Readings

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Abatement Level:	1.0 mg/cm²		
Report Number:	151-23		
Total Reading Sets:	111		
Job Started:	04/11/2023 11:03:56		
Job Ended:	04/11/2023 14:52:23		

------ END OF READINGS ------

Detailed XRF Readings

ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063

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INSPECTION DATE:	4/11/2023 - 4/11/2023
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Detailed XRF Readings

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Action Level:	1.0 (mg/cm²)		
Report Number:	151-23		
Total Readings:	117		
Unit Started:	04/11/2023 11:03:56		
Unit Ended:	04/11/2023 14:52:23		

Read #	Result	RTA Present	Building Type	-->RoomChoice	Structure	-->Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
1 (CAL)		Off								1.1 mg/cm²	Action Level (1.0)
2 (CAL)		Off								1.0 mg/cm²	Action Level (1.0)
3 (CAL)		Off								1.0 mg/cm²	Action Level (1.0)
4	Negative	Off	Residential	1004	Room	Wall	Plaster	White	A	0.2 mg/cm²	Action Level (1.0)
5	Negative	Off	Residential	1004	Room	Wall	Plaster	White	A	0.2 mg/cm²	Action Level (1.0)
6	Negative	Off	Residential	1004	Room	Wall	Plaster	Wallpape	B	0.5 mg/cm²	Action Level (1.0)
7	Negative	Off	Residential	1004	Room	Wall	Plaster	Orange	B	0.2 mg/cm²	Action Level (1.0)
8	Negative	Off	Residential	1004	Room	Wall	Plaster	White	C	0.1 mg/cm²	Action Level (1.0)
9	Negative	Off	Residential	1004	Room	Wall	Plaster	White	D	0.2 mg/cm²	Action Level (1.0)
10	Negative	Off	Residential	1004	Window	Casing	Wood	White	D	0.2 mg/cm²	Action Level (1.0)
11	Negative	Off	Residential	1004	Fire Place	Mantle	Wood	White	D	0.3 mg/cm²	Action Level (1.0)
12	Negative	Off	Residential	1004	Cabinets		Wood	White	B	0.3 mg/cm²	Action Level (1.0)

Detailed XRF Readings

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Report Number:	151-23		
Total Readings:	117		
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Unit Ended:	04/11/2023 14:52:23		

Read #	Result	RTA Present	Building Type	-- >RoomChoice	Structure	-- >Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
13	Positive	Off	Residential	1004	Room	counter top	Ceramic	Yellow	B	9.3 mg/cm²	Action Level (1.0)
14	Positive	Off	Residential	1004	Room	bathroom	Ceramic	Blue	B	6.9 mg/cm²	Action Level (1.0)
15	Positive	Off	Residential	1004	Room	bathroom	Ceramic	Gray	B	12.0 mg/cm²	Action Level (1.0)
16	Negative	Off	Residential	1004	Door		Wood	White	B	0.3 mg/cm²	Action Level (1.0)
17	Negative	Off	Residential	1004	Door	Casing	Wood	White	B	0.3 mg/cm²	Action Level (1.0)
18	Positive	Off	Residential	1004	Door	Casing	Wood	White	C	1.1 mg/cm²	Action Level (1.0)
19	Negative	Off	Residential	1004	Door		Wood	White	C	0.3 mg/cm²	Action Level (1.0)
20	Negative	Off	Residential	1004	Window	Casing	Wood	White	B	0.3 mg/cm²	Action Level (1.0)
21	Negative	Off	Residential	1004	Window	Casing	Wood	White	A	0.1 mg/cm²	Action Level (1.0)
22	Negative	Off	Residential	1004	Window	Sash	Wood	White	A	0.2 mg/cm²	Action Level (1.0)
23	Negative	Off	Residential	1004	Door		Wood	White	A	0.2 mg/cm²	Action Level (1.0)
24	Negative	Off	Residential	1004	Door	Casing	Wood	White	A	0.2 mg/cm²	Action Level (1.0)

Detailed XRF Readings

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Report Number:	151-23		
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Read #	Result	RTA Present	Building Type	-->RoomChoice	Structure	-->Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
25	Positive	Off	Residential	1004 ext	Door	Casing	Wood	White	B	5.1 mg/cm²	Action Level (1.0)
26	Positive	Off	Residential	1004 ext	Fascia		Wood	White	B	1.6 mg/cm²	Action Level (1.0)
27	Negative	Off	Residential	1004 ext	Soffit		Stucco	White	B	0.2 mg/cm²	Action Level (1.0)
28	Negative	Off	Residential	1004 ext	Room	Wall	Stucco	White	B	0.1 mg/cm²	Action Level (1.0)
29	Negative	Off	Residential	1004 ext	Window	Casing	Wood	White	B	0.3 mg/cm²	Action Level (1.0)
30	Negative	Off	Residential	1004 ext	Window	Sill	Wood	White	C	0.8 mg/cm²	Action Level (1.0)
31	Negative	Off	Residential	1004 ext	Room	Wall	Stucco	White	C	0.2 mg/cm²	Action Level (1.0)
32	Negative	Off	Residential	1004 ext	Column		Wood	Brown	C	0.1 mg/cm²	Action Level (1.0)
33	Negative	Off	Residential	1004 ext	Room	Wall	Stucco	White	D	0.3 mg/cm²	Action Level (1.0)
34	Negative	Off	Residential	1004 ext	Room	Wall	Stucco	White	A	0.3 mg/cm²	Action Level (1.0)
35	Positive	Off	Residential	1004 ext	Window	Frame	Wood	White	A	3.5 mg/cm²	Action Level (1.0)
36	Positive	Off	Residential	1004 ext	Window	Sill	Wood	White	A	2.9 mg/cm²	Action Level (1.0)

Detailed XRF Readings

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Action Level:	1.0 (mg/cm²)		
Report Number:	151-23		
Total Readings:	117		
Unit Started:	04/11/2023 11:03:56		
Unit Ended:	04/11/2023 14:52:23		

Read #	Result	RTA Present	Building Type	-- >RoomChoice	Structure	-- >Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
37	Negative	Off	Residential	1004 ext	Downspout		Metal	White	A	0.8 mg/cm²	Action Level (1.0)
38	Positive	Off	Residential	1004 ext	Room	gutter	Metal	White	A	1.7 mg/cm²	Action Level (1.0)
39	Negative	Off	Residential	1004 Garage	Room	gutter	Metal	White	B	0.1 mg/cm²	Action Level (1.0)
40	Negative	Off	Residential	1004 Garage	Room	Wall	Wood	White	B	0.0 mg/cm²	Action Level (1.0)
41	Positive	Off	Residential	1004 Garage	Door		Wood	Green	B	24.9 mg/cm²	Action Level (1.0)
42	Negative	Off	Residential	1004 Garage	Room	Wall	Stucco	White	A	0.0 mg/cm²	Action Level (1.0)
43	Positive	Off	Residential	1004 Garage	Window	Sill	Wood	White	A	1.4 mg/cm²	Action Level (1.0)
44	Positive	Off	Residential	1004 Garage	Soffit		Wood	White	A	1.4 mg/cm²	Action Level (1.0)
45	Negative	Off	Residential	980	Room	Wall	Plaster	White	A	0.3 mg/cm²	Action Level (1.0)
46	Negative	Off	Residential	980	Room	Wall	Drywall	White	A	0.2 mg/cm²	Action Level (1.0)
47	Negative	Off	Residential	980	Room	Wall	Drywall	White	A	0.4 mg/cm²	Action Level (1.0)
48	Positive	Off	Residential	980	Room	Wall	Drywall	White	C	1.0 mg/cm²	Action Level (1.0)

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Read #	Result	RTA Present	Building Type	-- >RoomChoice	Structure	-- >Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
49	Negative	Off	Residential	980	Room	Wall	Drywall	White	D	0.7 mg/cm²	Action Level (1.0)
50	Negative	Off	Residential	980	Cabinets		Wood	White	C	0.2 mg/cm²	Action Level (1.0)
51	Positive	Off	Residential	980	Room	counter top	Ceramic	Yellow	C	13.3 mg/cm²	Action Level (1.0)
52	Negative	Off	Residential	980	Window	Casing	Wood	White	D	0.3 mg/cm²	Action Level (1.0)
53	Negative	Off	Residential	980	Window	Sash	Wood	White	D	0.3 mg/cm²	Action Level (1.0)
54	Negative	Off	Residential	980	Window	Sash	Wood	White	A	0.3 mg/cm²	Action Level (1.0)
55	Negative	Off	Residential	980	Window	Sill	Wood	White	A	0.9 mg/cm²	Action Level (1.0)
56	Positive	Off	Residential	980	Room	Ceiling	Wood	White	A	1.1 mg/cm²	Action Level (1.0)
57	Negative	Off	Residential	980	Door		Wood	White	B	0.3 mg/cm²	Action Level (1.0)
58	Negative	Off	Residential	980	Door	Casing	Wood	White	B	0.5 mg/cm²	Action Level (1.0)
59	Negative	Off	Residential	980	Door	Casing	Wood	White	B	0.3 mg/cm²	Action Level (1.0)
60	Negative	Off	Residential	980	Door		Wood	White	B	0.3 mg/cm²	Action Level (1.0)

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Read #	Result	RTA Present	Building Type	-->RoomChoice	Structure	-->Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
61	Positive	Off	Residential	980 ext	Door	Casing	Wood	White	A	1.4 mg/cm²	Action Level (1.0)
62	Positive	Off	Residential	980 ext	Window	Casing	Wood	White	A	1.5 mg/cm²	Action Level (1.0)
63	Negative	Off	Residential	980 ext	Room	Wall	Stucco	White	A	0.1 mg/cm²	Action Level (1.0)
64	Negative	Off	Residential	980 ext	Room	Wall	Stucco	White	D	0.1 mg/cm²	Action Level (1.0)
65	Negative	Off	Residential	980 ext	Room	Wall	Stucco	White	D	0.3 mg/cm²	Action Level (1.0)
66	Negative	Off	Residential	980 ext	Soffit		Wood	Green	D	0.4 mg/cm²	Action Level (1.0)
67	Negative	Off	Residential	980 ext	Railing		Metal	Red	D	0.7 mg/cm²	Action Level (1.0)
68	Negative	Off	Residential	980 ext	Room	Wall	Stucco	White	C	0.4 mg/cm²	Action Level (1.0)
69	Negative	Off	Residential	980 ext	Room	Wall	Stucco	White	B	0.0 mg/cm²	Action Level (1.0)
70	Negative	Off	Residential	980 shed	Room	Wall	Stucco	White	A	0.0 mg/cm²	Action Level (1.0)
71	Negative	Off	Residential	980 shed	Room	Wall	Stucco	White	A	0.0 mg/cm²	Action Level (1.0)
72	Negative	Off	Residential	980 shed	Soffit		Wood	White	A	0.0 mg/cm²	Action Level (1.0)

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73	Positive	Off	Residential	980 shed	Door		Wood	White	A	8.0 mg/cm²	Action Level (1.0)
74	Negative	Off	Residential	980 garage	Room	Wall	Wood	White	A	0.2 mg/cm²	Action Level (1.0)
75	Negative	Off	Residential	980 garage	Room	Wall	Wood	White	B	0.1 mg/cm²	Action Level (1.0)
76	Negative	Off	Residential	980 garage	Window	Sash	Wood	White	C	0.3 mg/cm²	Action Level (1.0)
77	Negative	Off	Residential	980 garage ext	Window	Sash	Wood	White	A	0.4 mg/cm²	Action Level (1.0)
78	Negative	Off	Residential	980 garage ext	Room	Wall	Stucco	White	A	0.0 mg/cm²	Action Level (1.0)
79	Negative	Off	Residential	980 garage ext	Room	Wall	Wood	White	B	0.0 mg/cm²	Action Level (1.0)
80	Negative	Off	Residential	980 garage ext	Soffit		Wood	White	D	0.1 mg/cm²	Action Level (1.0)
81	Negative	Off	Residential	980 garage ext	Room	Wall	Stucco	White	D	0.0 mg/cm²	Action Level (1.0)
82	Negative	Off	Residential	980 back garage	Room	Wall	Metal	Gray	A	0.3 mg/cm²	Action Level (1.0)
83	Negative	Off	Residential	980 back garage	Room	Wall	Metal	Gray	A	0.2 mg/cm²	Action Level (1.0)
84	Negative	Off	Residential	976	Room	Wall	Drywall	White	A	0.1 mg/cm²	Action Level (1.0)

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85	Negative	Off	Residential	976	Room	Wall	Drywall	White	B	0.1 mg/cm²	Action Level (1.0)
86	Negative	Off	Residential	976	Room	Wall	Drywall	White	C	0.2 mg/cm²	Action Level (1.0)
87	Negative	Off	Residential	976	Room	Wall	Drywall	White	D	0.1 mg/cm²	Action Level (1.0)
88	Negative	Off	Residential	976	Window	Sash	Wood	White	B	0.1 mg/cm²	Action Level (1.0)
89	Negative	Off	Residential	976	Window	Frame	Wood	White	B	0.2 mg/cm²	Action Level (1.0)
90	Negative	Off	Residential	976	Window	Frame	Wood	White	B	0.0 mg/cm²	Action Level (1.0)
91	Negative	Off	Residential	976	Window	Sash	Wood	White	B	0.0 mg/cm²	Action Level (1.0)
92	Negative	Off	Residential	976	Door		Wood	White	A	0.1 mg/cm²	Action Level (1.0)
93	Negative	Off	Residential	976	Door	Casing	Wood	White	A	0.1 mg/cm²	Action Level (1.0)
94	Negative	Off	Residential	976	Room	Floor	Concrete	Gray	D	0.3 mg/cm²	Action Level (1.0)
95	Negative	Off	Residential	976	Room	Shower	Ceramic	Tan	B	0.0 mg/cm²	Action Level (1.0)
96	Negative	Off	Residential	976	Room	Floor	Ceramic	Tan	B	0.0 mg/cm²	Action Level (1.0)

Detailed XRF Readings

Inspection Date:	4/11/2023 - 4/11/2023	Inspection Site:	976/980/1004 Hearn Ave. Santa Rosa, CA
Action Level:	1.0 (mg/cm²)		
Report Number:	151-23		
Total Readings:	117		
Unit Started:	04/11/2023 11:03:56		
Unit Ended:	04/11/2023 14:52:23		

Read #	Result	RTA Present	Building Type	-->RoomChoice	Structure	-->Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
97	Negative	Off	Residential	976	Room	Floor	Ceramic	Tan	A	0.5 mg/cm²	Action Level (1.0)
98	Negative	Off	Residential	976 ext	Room	Wall	Transite	Tan	A	0.2 mg/cm²	Action Level (1.0)
99	Negative	Off	Residential	976 ext	Soffit		Wood	Tan	A	0.0 mg/cm²	Action Level (1.0)
100	Negative	Off	Residential	976 ext	Door		Wood	Red	A	0.0 mg/cm²	Action Level (1.0)
101	Negative	Off	Residential	976 ext	Door	Casing	Wood	White	A	0.0 mg/cm²	Action Level (1.0)
102	Negative	Off	Residential	976 ext	Window	Casing	Wood	White	A	0.1 mg/cm²	Action Level (1.0)
103	Negative	Off	Residential	976 ext	Window	Sill	Wood	White	A	0.2 mg/cm²	Action Level (1.0)
104	Negative	Off	Residential	976 ext	Column		Wood	Tan	A	0.2 mg/cm²	Action Level (1.0)
105	Negative	Off	Residential	976 ext	Room	Wall	Transite	Tan	B	0.2 mg/cm²	Action Level (1.0)
106	Negative	Off	Residential	976 ext	Room	Wall	Wood	White	C	0.6 mg/cm²	Action Level (1.0)
107	Negative	Off	Residential	976 ext	Window	Sill	Wood	White	C	0.0 mg/cm²	Action Level (1.0)
108	Negative	Off	Residential	976 gaeage	Room	Wall	Drywall	White	C	0.2 mg/cm²	Action Level (1.0)

Detailed XRF Readings

Inspection Date:	4/11/2023 - 4/11/2023	Inspection Site:	976/980/1004 Hearn Ave. Santa Rosa, CA
Action Level:	1.0 (mg/cm²)		
Report Number:	151-23		
Total Readings:	117		
Unit Started:	04/11/2023 11:03:56		
Unit Ended:	04/11/2023 14:52:23		

Read #	Result	RTA Present	Building Type	-- >RoomChoice	Structure	-- >Member	Substrate	Color	Wall	Lead (mg/cm²)	Mode
109	Negative	Off	Residential	976 gaeage	Room	Wall	Drywall	White	D	0.1 mg/cm²	Action Level (1.0)
110	Negative	Off	Residential	976 gaeage	Door		Metal	White	A	0.0 mg/cm²	Action Level (1.0)
111	Negative	Off	Residential	976 gaeage	Door		Metal	White	B	0.0 mg/cm²	Action Level (1.0)
112	Negative	Off	Residential	976 garage ext	Door		Metal	Tan	A	0.0 mg/cm²	Action Level (1.0)
113	Negative	Off	Residential	976 garage ext	Room	Wall	Transite	Tan	D	0.3 mg/cm²	Action Level (1.0)
114	Negative	Off	Residential	976 garage ext	Room	Wall	Transite	Tan	C	0.2 mg/cm²	Action Level (1.0)
115 (CAL)		Off	Residential	976 garage ext	Room	Wall	Transite	Tan	C	1.1 mg/cm²	Action Level (1.0)
116 (CAL)		Off	Residential	976 garage ext	Room	Wall	Transite	Tan	C	1.1 mg/cm²	Action Level (1.0)
117 (CAL)		Off	Residential	976 garage ext	Room	Wall	Transite	Tan	C	1.1 mg/cm²	Action Level (1.0)

------ END OF READINGS ------

Summary XRF Readings

ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063

INSPECTION SITE:	976/980/1004 Hearn Ave. Santa Rosa, CA
INSPECTION DATE:	4/11/2023 - 4/11/2023
REPORT NUMBER:	151-23
INSTRUMENT TYPE:	Viken Detection Pb200i XRF Lead Paint Analyzer 3112
ACTION LEVEL:	1.0 (mg/cm^2)
STATEMENT:	Readings were performed using the Viken Dectection Pb200i.

Summary XRF Readings

Inspection Date: 4/11/2023 - 4/11/2023
Action Level: 1.0 (mg/cm²)
Report Number: 151-23
Total Readings: 117
Unit Started: 04/11/2023 11:03:56
Unit Ended: 04/11/2023 14:52:23

Inspection Site: 976/980/1004 Hearn Ave.
Santa Rosa, CA

Data Entry Summary	No Result Count	No Result Percent	Negative Count	Negative Percent	Positive Count	Positive Percent	Total Readings
-->Member	**6**	**6.7**	**93**	**104.5**	**18**	**20.2**	**89**
Wall	3	6.7	41	91.1	1	2.2	45
Casing	0	0.0	12	75.0	4	25.0	16
Mantle	0	0.0	1	100.0	0	0.0	1
counter top	0	0.0	0	0.0	2	100.0	2
bathroom	0	0.0	0	0.0	2	100.0	2
Sash	0	0.0	7	100.0	0	0.0	7
Sill	0	0.0	4	66.7	2	33.3	6
Frame	0	0.0	2	66.7	1	33.3	3
gutter	0	0.0	1	50.0	1	50.0	2
Ceiling	0	0.0	0	0.0	1	100.0	1
Floor	0	0.0	3	100.0	0	0.0	3
Shower	0	0.0	1	100.0	0	0.0	1

Summary XRF Readings

Inspection Date: 4/11/2023 - 4/11/2023
Action Level: 1.0 (mg/cm²)
Report Number: 151-23
Total Readings: 117
Unit Started: 04/11/2023 11:03:56
Unit Ended: 04/11/2023 14:52:23

Inspection Site: 976/980/1004 Hearn Ave.
Santa Rosa, CA

Data Entry Summary	No Result Count	No Result Percent	Negative Count	Negative Percent	Positive Count	Positive Percent	Total Readings
Substrate	**6**	**5.3**	**93**	**81.6**	**18**	**15.8**	**114**
Plaster	0	0.0	7	100.0	0	0.0	7
Wood	0	0.0	46	79.3	12	20.7	58
Ceramic	0	0.0	3	42.9	4	57.1	7
Stucco	0	0.0	15	100.0	0	0.0	15
Metal	0	0.0	8	88.9	1	11.1	9
Drywall	0	0.0	9	90.0	1	10.0	10
Concrete	0	0.0	1	100.0	0	0.0	1
Transite	3	42.9	4	57.1	0	0.0	7

------ END OF READINGS ------

Section A - Scope of Work and Permits

1. Abatement, off haul, and disposal of hazardous materials identified in the Bulk Asbestos Analysis Report.

2. Demolition of designated structures and removal of materials from site as noted per plans to include but not limited to:

   2.1 976 Hearn Avenue: residential structure, one (1) garage/outbuilding.

   2.2 980 Hearn Avenue: residential structure, three (3) sheds/outbuildings.

   2.3 1004 Hearn Avenue: residential structure, one (1) garage/outbuilding.

3. Provide temporary fencing around area of work during abatement and demolition.

4. Provide new 6’-0” high chainlink fence in path of existing fence, anchored in concrete, as noted on drawing A1.0-1.

5. Provide a Storm Water Pollution Prevention Plan (SWPPP) and implement all associated work.

6. The SWPPP will be submitted to the City of Santa Rosa for review and approval prior to installation and implementation of Best Management Practices.

7. Provide a registered biologist during fieldwork to walk a path in front of vehicles while on-site to identify potential California tiger salamander burrows so vehicles can avoid potential burrows. Reference City of Santa Rosa Mitigation Monitoring and Reporting Program dated August 2016.

8. Provide field reports from biologist upon completion of site activities each day.

9. All work to be performed shall stay within the limit of work as noted on drawing A1.0-1.

10. Contractor is responsible to provide power and water for the project as required to perform their work.

11. Include all work as indicated on the City of Santa Rosa Hearn Community Hub Project Manual dated September 15, 2023 and City of Santa Rosa Hearn Community Hub Hazardous Material & Structural Demolition drawings dated August 18, 2023.

12. The Contractor shall obtain all necessary and required permits for the project. All permits issued by the City Building Department will be issued at no cost to the Contractor; these fees will be paid by an appropriate City department. All other required permits shall be obtained at the Contractor's expense.

    All electrical service charges or fees that may be required by Pacific Gas and Electric Company shall be paid for by an appropriate City department.

CITY OF SANTA ROSA

STATE OF CALIFORNIA

Hearn Ave Abatement and Demolition - 1004, 980, 976

The work to be performed and referred to herein is in the City of Santa Rosa, California and consists of improvements to be constructed in accordance with the provisions of the Invitation for Bids, containing the Notice to Bidders, the Special Provisions, the Project Plan(s), the Bid Forms and the Contract, all of which are by reference incorporated herein, and each Addendum, if any is issued, to any of the above which is also incorporated by reference herein.

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that Contractor has carefully examined the Project Plans, Invitation for Bids and conditions therefor, and is familiar with all bid requirements, that Contractor has examined this Contract and the provisions incorporated by reference herein, and Contractor hereby proposes, and agrees that if its bid is accepted by the City, Contractor will provide all necessary machinery, tools, apparatuses, and other means of construction, and to do all the work and furnish all the materials and services required to complete the construction in accordance with the Contract, the Special Provisions, the Project Plan(s), and Addenda to any of the above as incorporated by reference, in the time stated herein, for the unit prices and/or lump sum prices as follows:

CITY OF SANTA ROSA
C02460 HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976
UNIT PRICE SCHEDULE

NAME OF BIDDER: _____

Project Title: **HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976**

Line #	Description	Unit	Quantity	Unit Price	Total Price
1	HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976	LS	1	$_____	$_____

In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;

2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the "Total" column. In case of discrepancy between the sum of the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column shall prevail. The bid comparison will be based on the sum of the "Total" column for each bidder.

If this Contract Bid is accepted by the City and the undersigned fails to execute the Contract and to give all the bonds required under the Contract, with a surety satisfactory to the Award Authority of the City of Santa Rosa, within ten calendar days after bidder has received the Notice of Award from the Engineer, then the Award Authority may, at its option, determine that the bidder has abandoned the Contract, and thereupon this bid and the acceptance thereof shall be null and void, and the forfeiture of the security accompanying this bid shall be in accordance with California Public Contract Code section 20172.

The undersigned understands and agrees that the City is not responsible for any error or omissions on the part of the undersigned in making this bid.

The bidder to whom the Contract is awarded agrees to execute the Contract in favor of the City, in the form attached, and to deliver any and all required bond(s) and insurance certificates within ten calendar days from the date of Contractor’s receipt of the Notice of Award. Following the award of the Contract, Contractor shall commence work within ten calendar days from the day authorized in the Notice to Proceed and diligently prosecute the same to completion in accordance with Section 8-1.04.

LIST OF SUBCONTRACTORS

NAME OF BIDDER: _____

The following is a list of each subcontractor who will perform work or labor or render services to the undersigned for the construction of the project in an amount in excess of ½ of 1% of the total amount of this bid.

The undersigned agrees that any portion of the work in excess of ½ of 1% of the total amount of this bid and for which no subcontractor is designated herein will be performed by the undersigned.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK (ITEM NO.)

LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER: _____

NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

NOTE: The above Noncollusion Declaration is part of the Contract Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Declaration.

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

Accompanying this bid is a guaranty in the form of (Notice: Insert the words "cash $," "Cashier's Check," "Certified Check," or "Bidder's Bond" as the case may be):

_____

in an amount equal to at least ten percent of the total of this bid.

The undersigned further agrees that if Contractor does not execute the Contract and deliver the necessary bonds to the City within the period of time specified in this Invitation for Bids, the proceeds of the security accompanying this bid shall become the property of the City of Santa Rosa, California, and this bid and the acceptance thereof may, at the option of the City, be considered null and void.

The undersigned is licensed in accordance with an act providing for the registration of Contractors, License No. _____, Class _____, expiration date _____.

The undersigned in registered with the Department of Industrial Relations, Registration No. _____.

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager of the corporation; if a partnership, state true name of partnership, also the names of all partners in the partnership; if the bidder is a sole proprietor, state the business name and the proprietor's name in full.

Secretary of State Business Entity Number: _____.

_____

_____

_____

_____

Business Address

_____

Telephone Number

I declare under penalty of perjury that the foregoing is true and correct.

BIDDER'S SIGNATURE: _____

TITLE: _____

DATE: _____

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

CONTRACT NO. C02460
HEARN AVE ABATEMENT AND DEMOLITION - 1004, 980, 976

This Contract is made and entered into as of _____ at Santa Rosa, California, between the City of Santa Rosa (“City") and _____ of _____ ("Contractor").

ARTICLE I - For and in consideration of the payment and agreement hereinafter mentioned, to be made and performed by City, and under the conditions expressed in the required bonds hereunto annexed, Contractor agrees that for the benefit of City, at its own cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the Special Provisions to be furnished by City, necessary to construct and complete the work herein described in a good, workmanlike, and substantial manner. The work embraced herein shall be done in accordance with the Standard Specifications of the State of California Department of Transportation, dated 2010, insofar as the same may apply (Standard Specifications); in accordance with the City of Santa Rosa Construction Specifications for Public Improvements (City Specifications); in accordance with the City of Santa Rosa Design and Construction Standards, (City Standards); in accordance with the State of California Department of Transportation Standard Plans, dated 2010 (Standard Plans), (collectively, “Contract Documents”) and in accordance with the Special Provisions hereinabove set forth, all of which are hereby incorporated into and made part of this Contract.

The work to be performed is further shown upon a plan consisting of 5 sheets entitled, Hearn Ave Abatement and Demolition - 1004, 980, 976, File Number 2023-0032, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

ARTICLE II - Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all the work contemplated and embraced in this Contract; also for all loss or damages arising out of the nature of the work aforesaid, or from the acts of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by City and for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work, and the whole thereof in the manner and according to the Project Plans and Invitation for Bids therefor, and the requirements of the Engineer under them to wit:

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			$ _____	$ _____

TOTAL BASE BID (SUM OF "TOTAL" COLUMN) $ _____

BID ITEMS IN THIS SECTION WILL BE INSERTED UPON AWARD OF THE CONTRACT AND SHALL BE THE SAME AS THOSE BID UPON.

ARTICLE III - City and Contractor hereby promise and agree that Contractor shall provide the materials and do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and City hereby agrees to pay for the same at the time, in the manner, and upon the conditions set forth; and the parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein stated.

ARTICLE IV - By execution of this Contract, Contractor hereby represents and certifies that Contractor is aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor hereby agrees to comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE V - It is further expressly agreed by and between the parties hereto that the Invitation for Bids, containing the Notice to Bidders including any required Bonds, the Contract Documents, and any Addenda are all essential parts of this Contract and are specially referred to and by such reference made a part hereof. In the event of any conflict in the provisions thereof, the terms of said documents shall control each over the other, in the following order:

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

City:	**Contractor:**
City of Santa Rosa, a Municipal corporation	Name of Contractor, Type of entity
By: _____	By: _____
Title: _____	Name: _____
ATTEST:	Title: _____
By: _____	By: _____
Title: _____	Name: _____
Approved as to form:	Title: _____
By: _____ Office of City Attorney	