

APPROVED

JAN 07 2015

REPORT OF GENERAL MANAGER

NO. 14-315

DATE December 10, 2014

BOARD OF RECREATION
1 PARK COMMISSIONERS

C.D. 3

BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: WOODLAND HILLS RECREATION CENTER – PARK RENOVATION
(PRJ#20090) (W.O. #E1907454) PROJECT – REVIEW OF BIDS AND AWARD
OF CONTRACT

R. Adams _____	V. Israel _____
*R. Barajas <u>CSD</u> _____	K. Regan _____
H. Fujita _____	N. Williams _____



 General Manager

Approved as amended _____ Disapproved _____ Withdrawn _____

RECOMMENDATIONS:

That the Board:

1. Reject all bid protests received on the Woodland Hills Recreation Center - Park Renovation (W.O. #E1907454) project, as indicated below:
 - A. Reject the bid protest, dated September 2, 2014 (Attachment A), by Feldman & Associates, Inc., legal counsel for AWI Builders, Inc. (AWI), against Royal Construction, Corp. (Royal), for the reasons stated in the Summary;
 - B. Reject the bid protest, dated August 25, 2014 (Attachment B), by Environmental Construction, Inc. (ECI), second lowest bidder, against Royal, for the reasons stated in the Summary; and
 - C. Reject the bid protest, dated August 29, 2014 (Attachment C), by Harwood Construction, Inc. (HCI), sub-contractor of ECI, against Royal, for the reasons stated in the Summary.

2. Pursuant to Los Angeles City Charter Section 371(c), Administrative Code Section 10.15(c), and Paragraph 3 of the Instructions to Bidders, waive, as an informality, the failure of Royal, to meet the required minimum \$8,000,000.00 in total value for one of the three (3) completed projects listed in its Prime Contractor Minimum Qualifications, in that the Siqueiros Mural Protective Shelter project was listed at \$6,649,282 in value, for reasons stated in the Summary.

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3. Find Royal, with a base bid of \$12,988,000.00, to be the lowest responsive and responsible bidder for the Project;
4. Award a construction contract to Royal, for a total award amount of \$12,988,000.00, all according to the plans and specifications;
5. Direct staff to reallocate the unexpended Recreation and Parks (RAP) Special Fund for the Reseda Pool Replacement \$1,200,000 to Woodland Hills Recreation Center-Park Renovation (PRJ#20090) project;
6. Authorize the Department's Chief Accounting Employee to transfer \$1,200,000.00 from Fund 302, Department 89, Account 89845M Reseda Pool Replacement to Fund 302, Department 89, Account TBD Woodland Hills Recreation Center-Park Renovation;
7. Authorize the Department's Chief Accounting Employee to transfer \$3,800,000 from Fund 205, Department 88, Account 88000H to Fund 205, Department 88, Account TBD;
8. Approve the allocation of \$3,800,000 from Fund 205, Department 88, Account TBD for the Woodland Hills Recreation Center-Park Renovation (PRJ#20090) project, as described in the Summary of this Report;
9. Authorize the Department's Chief Accounting Employee to encumber funds in the amount of \$12,988,000.00 from the following fund and account numbers under the awarding authority of this Board Report;

<u>FUNDING SOURCE</u>	<u>FUND/DEPT/ACCT. NO.</u>	<u>ENCUMBRANCE AMOUNT</u>
Quimby*	302/89/89460K-WH	\$8,278,597.00
Proposition K – FY 2013-14**	43K/10/10KM26	\$100,000.00
Proposition K – FY 2014-15**	43K/10/10LM26	\$950,000.00
Proposition K – FY 2015-16**	TBD	
RAP Special Fund	302/89/TBD	\$1,200,000.00
Grant Fund	205/88/TBD	\$2,459,403.00
TOTAL		\$12,988,000.00

* Quimby fund total amount for this project is \$9,728,597.00, of which \$1,450,000.00 has already been expended for soft cost, which leaves \$8,278,597.00 remaining and available for construction.

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** The total Proposition K grant was for \$2,000,000.00. Proposition K funds can only be used toward construction of the new recreation center and gymnasium.

10. Authorize the General Manager or his designee to make technical corrections as necessary to carry out the intent of this Board Report; and,
11. Authorize the Board President and Secretary to execute the construction contract, subject to approval by the City Attorney as to form.

SUMMARY:

On July 9, 2014, the Board approved final plans and specifications for the Woodland Hills Recreation Center – Park Renovation (PRJ20090) (W.O. #E1907454) project, located at 5858 Shoup Avenue, Woodland Hills, California 91367 (Board Report No. 14-176). The plans and specifications were prepared by the Department of Public Works, Bureau of Engineering (BOE), Architectural Division, in conjunction with the design consultant, Gruen Associates.

The proposed scope for this project includes the following:

1. Demolition of the existing administration and gymnasium buildings, and construction of a new 12,400 square-foot (SF) recreation building that includes a gymnasium, multipurpose rooms, office, kitchen, restrooms and support facilities. Additional improvements include outdoor lighting, an outdoor terrace, children’s play areas, seating, landscaping and irrigation (Portion A of the proposed final plan, which is also ~~Deductive Alternate No. 1~~).
2. Demolition of the existing swimming pool and bathhouse, construction of a new 6,800 SF (90-foot by 75-foot) pool, a 2,000 SF bathhouse, a 1,000 SF pool equipment building, and utility infrastructure upgrades (Portion B of the proposed final plan, which is also Deductive Alternate No. 1).
3. Construction of a new playground (Portion C of the proposed final plan, which is also Deductive Alternate No. ~~1~~).

On August 19, 2014, the Board received a total of six (6) bids as follows:

<u>Bidders</u>	<u>Base Bid</u>	<u>Ded Alt #1</u>	<u>Ded Alt #2</u>
Royal Construction Corp.	\$12,988,000.00	\$3,118,000.00	54,000
Environmental Construction, Inc.*	\$13,444,200.00	\$1,150,000.00	100
AWI Builders, Inc.	\$13,539,000.00	\$2,850,000.00	0
C. J. W. –MZT A Joint Venture**	\$14,300,000.00	\$2,500,00.00	0

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<u>Bidders</u>	<u>Base Bid</u>	<u>Ded Alt #1</u>	<u>Ded Alt #2</u>
USS Cal Builders, Inc.	\$15,794,000.00	\$2,100,000.00	\$20,000.00
Morillo Construction	\$17,488,000.00	\$2,000,000.00	\$16,000.00

- * Environmental Construction, Inc. was deemed non responsive for failure to submit the Prime Contractor's Minimum Qualifications Form (Page GR-S3). This form was required to be submitted with the bid, so that staff could review the information provided and determine if the bidders/prime contractors met the minimum qualifications and has adequate experience to construct this project.

BID PROTEST BY FELDMAN & ASSOCIATES, INC., LEGAL COUNSEL FOR AWI

Feldman & Associates, Inc., legal counsel for AWI, filed a bid protest on September 2, 2014 (Attachment A), protesting the bid submitted by Royal.

AWI's protest letter states that Royal is not the lowest responsible bidder because of the following reasons:

1. Royal does not meet the Prime Contractor's minimum qualifications (page GR-S3):

Protest Item 1:

- A. The Siqueiros Mural Protective Shelter/Interpretive Center (MPS & IC) is valued at only \$6,600,000.00 – well under the \$8,000,000.00 threshold. Neither is it a recreational facility or community center.

Response: The Instructions to Bidders required that the prime contractor meet certain minimum qualifications to ensure that the prime contractor has adequate qualifications and experience in constructing public recreation facilities. The prime contractor must have completed at least three public recreation facilities of \$8 million or greater each, for government agencies in the past six years; of new construction; LEED certified; and currently in operation. Information about the projects completed by the prime contractor was required to be submitted on the Prime Contractor's Minimum Qualifications required forms (GR-S3 and GR-S4). See Attachment D, the GR-S3 and GR-S4 forms submitted by Royal. Royal listed the Siqueiros Mural Protective Shelter and Interpretive Center (MPS & IC) project as one of the three recreational projects to meet the minimum qualifications. Although Royal's contract with the Board of Public Works for the Siqueiros project was for \$6,649,282, which falls short of the \$8 million specified in the Prime Contractor's Minimum Qualification, the Siqueiros MPS & IC project substantiates that Royal has adequate

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qualifications and experience in constructing public recreation facilities for the following reasons:

- i. Overall, the Siqueiros MPS & IC project cost approximately \$9.95 million dollars, and involved the restoration and preservation of one of Los Angeles' most famous murals, "America Tropical" originally painted in 1932 by Mexican painter David Alfaro Siqueiros. The MPS & IC project has two major components: a mural shelter structure and a rooftop viewing platform, public exhibit and interpretive center. Its construction required the circumscription around the historic fabric of the existing legendary structures of El Pueblo de Los Angeles Historical Monument (El Pueblo). As a result, Royal encountered as many challenges as are encountered in public recreation facilities projects, such as the Woodland Hills Recreation Center project.
- ii. Besides the public exhibit and interpretive center, the new mural shelter structure is supported by two massive steel columns on top of pile cap foundations that are connected to cast-in-drilled-hole (CIDH) piles 50 feet deep. The installation of the piles required providing adequate clearance for drilling equipment and material by excavating up to 12 feet of soil from the existing basement spaces in each of the buildings. The excavation exposed the building foundations that are needed to provide underpinning of the existing footings in both the Gibbs and the Hammel Buildings. Drilling of the piles was performed at night in order to minimize the impact on El Pueblo's vendors and visitors during regular business hours. Once the pile cap was in place, the team focused on placing the 30-ton transfer beam inside the Hammel Building. The built-up steel transfer beam was designed in a cantilevered configuration to extend over the "Zanja Madre", and transmit the vertical load of the eastern column to the pile cap to support half of the canopy weight at over seventy (70) tons (size 40-feet by 90-feet). After the successful installation of the piles, pile caps, transfer beam, and built-up columns, the steel space-frame shelter structure was erected in its final location, on top of the south facing of the existing mural.
- iii. During execution of the work on the mural shelter structure, the Getty Conservation Institute (the Getty) was performing conservation work to further preserve the mural surface. At the same time, the City's Department of General Services (GSD) was working on reinforcing the mural wall from behind the mural. Royal had to coordinate its construction work with the preservation work being done by the Getty and GSD in order to ensure that the mural was protected during construction. Royal also had to coordinate its

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construction work with GSD's work to relocate Olvera Street tenants impacted by the project.

- iv. An interactive computer system was also installed at the exhibit and interpretive center, by a separate contractor at a cost of \$1,700,000. Royal's construction work on the Interpretive Center required collaborating with the interactive computer system contractor. Royal had to coordinate complex work between Royal and its specialty subcontractors and the exhibit interactive computer system vendor, and the relocation activities of the merchant spaces during the viewing platform installation.
- v. Recreation is defined as "something people do to relax or have fun; activities done for enjoyment." The Siqueiros MSP & IP project is integral to the overall recreational experiences enjoyed by visitors to El Pueblo, which includes a park-like setting around the band stand and performance areas, cultural and historic museum-like spaces, and dining and shopping. Experience in "constructing public recreational facilities," as contemplated in the Prime Contractor's Minimum Qualifications, was not intended to be strictly limited to sports facilities. Thus, the Siqueiros MSP & IP project meets the "public recreational facility" criteria.

Recommendation: Pursuant to Los Angeles City Charter Section 371(c), Administrative Code Section 10.15(c), and Paragraph 3 of the Instructions to Bidders, the City has the right to waive any informality in the bid when to do so would be to the advantage of the City. As such, staff recommends that the Board, waive, as an informality, the failure of Royal, to meet the required minimum \$8,000,000.00 in total value for one of the three (3) completed projects listed in its Prime Contractor Minimum Qualifications, in that although Royal's contract for the Siqueiros Mural Protective Shelter and Interpretive Center project was for \$6,649,282, the overall project within which Royal had to perform its contract cost approximately \$9,950,000, and the type and complexity of the Royal's work on that project substantiate that Royal has the requisite qualifications and experience to construct the Woodland Hills Recreation Center – Park Renovation project. It would be to the City's advantage to awarding the contract to Royal in light of its experience and qualifications and in light of Royal's bid of \$12,988,000 being \$512,000 below the City Engineer's cost estimate of \$13,500,000.

- B. The Los Angeles Zoo Reptile Exhibit (Reptile Exhibit) is not a recreational facility.

Response: The Reptile Exhibit encompasses over 60 species of amphibians, invertebrates, and reptiles from around the world. There are a total of 49 exhibits; each exhibit closely resembles the natural ecosystem of its inhabitants. Visitors

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experience the natural sounds of the species represented in the Reptile Exhibit and their habitats both inside and outside the exhibit through audio presented as well.

The Reptile Exhibit is located inside the Los Angeles Zoo, which is located within Griffith Park. The Los Angeles Zoo was part of the Recreation and Parks Department until 1996, when it became an independent City Department. Consistent with the definition of recreation discussed earlier in this report, the Los Angeles Zoo Reptile Exhibit is a public recreational facility.

- C. Pacoima Neighborhood City Hall is neither a community center nor gymnasium.

Response: The Pacoima Neighborhood City Hall is a 12,500 square feet multipurpose community center that provides both government services and recreational programs to the community. The facility provides or is host to activities such as community meetings, youth programs, training sessions, workshops, holiday parties, art shows, movie nights, proms, etc. The facility even has a permanently affixed movie screen in the outdoor courtyard where family movie nights are held. This facility operates much like the community spaces that are contained within many of the Department's recreation centers. Thus, the Pacoima Neighborhood City Hall operates as a community center as well as a recreation facility.

2. Royal's bid is not responsive—Subcontractor issues:

Protest Item 2:

- A. Royal listed Suri Steel, Inc. (Suri), license #945739, which the protester alleges is suspended for the lack of Workers Compensation Insurance.

Response: Licensing of subcontractors to perform the work is not required at the time of bid. The Department of Public Works, Bureau of Contract Administration (BCA) will enforce the licensing and approval process of subcontractors prior to the start of construction. However, this is no longer an issue any longer because Suri's license has been retroactively re-instated.

- B. Royal could lowball its price by listing a subcontractor with a suspended license. Then, Royal could request a subcontractor substitution or self-perform the work.

Response: Suri would have to have a valid license prior to commencing its subcontracting work on the project. Royal would follow the City's standard subcontractor substitution process or request to be allowed to substitute Suri with another subcontractor or self-perform the work, which will require a formal review

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and approval process through the BCA, in compliance with Los Angeles Administrative Code. However, this is no longer an issue because Suri is license has been retroactively re-instated.

- C. This encourages bid shopping that places Royal at an unfair advantage, which is inconsistent with California Public Contract Code Section 4101.

Response: California Public Contract Code Section 4101 is intended to prevent bid shopping in public works projects. The subcontractor substitutions must comply with the City's Administrative Code Section 10.14 and the Subcontractor Substitution procedures, which are intended to prevent bid shopping. This is no longer an issue because Suri is license has been retroactively re-instated.

Protest Item 3:

- A. Royal listed Baseline Fire Protection (Baseline), license #995049, to install the fire sprinkler system that does not meet the minimum experience qualification in the specifications. Baseline acquired license on July 23, 2014.

Response: The current staff for Baseline has the required experience to perform the work through previous employer. When the contract get awarded, Baseline will submit for approval the required documentation to satfy the specifications. In the event the City finds that it does not meet the qualifications, Royal will have to follow the City's Administrative Code and Substitution Procedures.

Protest Item 4:

- A. Royal failed to list a subcontractor for the asbestos removal work.

Response: Royal could choose to bring on an asbestos subcontractor under their payroll or under the demolition-subcontractor either of which would require approval by BCA, as discussed in the response to Protest Item 2, above. Additionally, the City's Administrative Code Section 10.14 only requires, that a bidder list subcontractors that will do work valued at \$10,000.00 or one-half of one percent of the base bid, whichever is greater. Royal informed staff that Royal estimated the asbestos work to be less than the threshold amount, thus they did not list an asbestos subcontractor.

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Protest Item 5:

- A. Royal listed CSLB, License No. 604927, for HUR Flooring. This is the license number of Beth Hakes Interiors, which is expired.

Response: Royal listed HUR Flooring, however made a clerical error on the license number. The correct license number has been submitted, License No. 604929. Administrative Code Section 10.14 does not require that the bidder list the license number of a subcontractor at the time of the bid. However, the license status of a subcontractor is always verified by BCA prior to BAC approving a subcontractor to do the work on the project.

Protest Item 6:

- A. Board should verify whether Crown Electrical is registered on the LABVN website; experience should be carefully reviewed.

Response: Staff has confirmed that Crown Electrical is registered with LABAVN. Royal hired Crown Electrical to work as a subcontractor on the Siqueiros Mural Protective Shelter project and the Los Angeles Zoo Reptile Exhibit project.

BID PROTEST BY ECI:

ECI filed correspondence dated August 25, 2014 (Attachment B), protesting the bid of Royal.

ECI's protest letter states that:

Protest Item 1:

- A. Royal listed CABD Construction for the installation of "translucent panel" made by CPI Daylighting System (CPI). CPI is not listed on the Los Angeles City Research Report (LARR listing) website as an approved product.

Response: The City of Los Angeles Department of Building and Safety (DBS) requires the "translucent panel" products to have a LARR listing. Specification require that the product to be tested for light transmission, deflection, water penetration for both static and dynamic pressure, etc. Staff has contacted CPI's representative, and found that CPI has an ICC-ESR-1253, which is widely recognized by State of California and the County of Los Angeles. The City's Department of Building and Safety (DBS) testing protocol requirements may impose testing equivalent to the ICC-ESR-1253 testing procedure to ensure the product meets the

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City performance requirements as well.

If DBS does not approve CPI products, staff could reject the substituted product and require that Royal provide the specified or an equal product, at no additional cost to the City.

Protest Item 2:

- A. Royal has indicated that it will self-perform Lithocrete concrete flooring, which can only be installed by a manufacturer-approved installer.

Response: Royal has self-performed and completed the Los Angeles Zoo Reptile Exhibit, and three City branch library projects (Studio City, Baldwin Hills, and Pacoima) using Lithocrete. Royal has hired a Lithocrete certified installer under their pay roll to perform the work. Royal informs staff that Royal intends to hire a certified installer under their payroll.

Protest Item 3:

- A. Royal has submitted the Anticipated Employment Utilization Report form (AEUR) (page 13 of the bid package) with erroneous figures. It is not possible for Royal to self-perform 30% of the work in the amount of \$3,900,000 with its only 13 staff hours.

Response: The purpose of Anticipated Employment Utilization Report (AEUR) (page 13 of Bid Package) is not to show that the contractor has enough staff to do the work. Rather it is to get an idea of anticipated ethnic composition because AEUR is part of the Affirmative Action Plan. It is intended to provide information on anticipated ethnic diversity of their employees for the project. There is no requirement to have a set number of staff on the payroll

BID PROTEST BY HCI:

HCI filed correspondence dated September 2, 2014 (Attachment C), protesting the bid submitted by Royal. HCI is a subcontractor to ECI.

HCI's protest letter states that:

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Protest Item 1:

- A. Royal listed CABD Construction for the installation of “translucent panel” made by CPI Daylighting System (CPI). CPI is not listed on the Los Angeles City Research Report (LARR listing) website as an approved product.

Response: See previous response for Item 1 above regarding ECI’s protest letter.

Protest Item 2:

- A. CPI products are extruded Polycarbonate, not fiberglass as specified in the project Specification Section 084523, which has in its very title “Fiberglass-Sandwich-Panel-Assemblies.”

Response: Product substitution is allowed for public projects. Specifications (General Requirements (GR) page 13-14), provides that the request for Substitution and “or Equal” submittal must be made within 30 days of Notice to Proceed for Construction. However, the product has to be proven as equal to what is specified in the specifications. Staff could reject the requested substituted product and require the contractor to provide the specified or an equal product at no additional cost to the City.

Based on the above explanations and determinations, staff recommends that the Board reject the bid protests filed by AWI, ECI and HCI’s against Royal’s bid.

In summary, the bid specifications stated that the low bidder would be determined to be the responsible and responsive bidder submitting the lowest base bid. The base bid includes both of the Deductive Alternates. Royal has submitted the lowest base bid, in the amount of \$12,988,000.00, which is \$512,000.00 below the City Engineer’s cost estimate of \$13,500,000.00, as shown above. It is recommended that the project be awarded to Royal Construction Corp., for a total construction contract amount of \$12,988,000.00.

Reseda Park – Pool Replacement and Bathhouse Renovation (PRJ1618P) was awarded to Morillo Construction, Inc., (Board Report No. 11-182) and Final Acceptance of that project was approved March 6, 2013 (Board Report No. 13-063). The Reseda Park project was completed under budget with a residual balance of \$1,203,911.00. The residual balances available for reallocation is \$1,200,000.00 from the Municipal Recreational Program (MRP) Fund. Staff recommends that the \$1,200,000.00 in residual MRP Funds be reallocated to the Woodland Hills Recreation Center project.

Sufficient funds are available to award the contract and for the construction and project contingencies from the following accounts:

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<u>FUNDING SOURCE</u>	<u>FUND/DEPT/ACCT. NO.</u>	<u>ENCUMBRANCE AMOUNT</u>
Quimby*	302/89/89460K-WH	\$8,278,597.00
Proposition K – FY 2013-14**	43K/10/10KM26	\$100,000.00
Proposition K – FY 2014-15**	43K/10/10LM26	\$950,000.00
Proposition K – FY 2015-16**	TBD	
RAP Special Fund	302/89/TBD	\$1,200,000.00
Grant Fund	205/88/TBD	\$2,459,403.00
TOTAL:		\$12,988,000.00

* Quimby fund total amount for this project is \$9,728,597.00, of which \$1,450,000.00 has already been expended for soft cost, which leaves \$8,278,597 remaining and available for construction. The shortfall is \$2,709,403.00 and need to obtain in order to award the construction contract.

** The total Proposition K grant was for \$2,000,000.00. Proposition K funds can only be used toward the new recreation center.

BUSINESS INCLUSION PROGRAM:

The project is also subject to the City’s new Business Inclusion Program (BIP), in compliance with the Mayor’s Directive No. 14, which was adopted by the Board of Recreation and park commissioners on February 15, 2012 (Board Report No. 12-050) and which replaces the former Minority Business Enterprise, Women Business Enterprise, and Other Business Enterprise (MBE/WBE/OBE) Good Faith Effort Subcontractor Outreach Program. Royal Construction Corp. has successfully posted all the required BIP outreach documentation on the Los Angeles Business Virtual Assistance Network (LABAVN) that demonstrated satisfactory effort in its outreach to Minority Business Enterprise (MBE), Women Business Enterprise (WBE), Small Business Enterprise (SBE), Emerging Business Enterprise (EBE), Disabled Veteran Business Enterprise (DVBE), and Other Business Enterprise (OBE) for sub-bid or subcontracting businesses. Staff has evaluated the outreach documentation submitted by Royal Construction Corp. and determined that they have passed all six indicators as required for the effort to obtain sub-bid/subcontracting participation by MBE, WBE, SBE, EBE, DVBE and OBE businesses, and is in compliance with the BIP outreach requirements. The outreach documentation package is on file in the Board Office, and a synopsis of the said package is attached to this Report.

Staff reviewed the responsiveness and work performance of Royal Construction Corp. on past Department of Public Works projects and found them to be satisfactory. The Department of Public Works, Office of Contract Compliance (OCC) indicated that there have been no labor compliance violations and that all other legal requirements have been complied with by the bidder.

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The City Attorney and staff have reviewed the bid submitted by Royal Construction Corp., and found it to be in order, subject to Board action on Recommendation No. 2 in the Report. Staff recommends that the Board find Royal Construction Corp. to be the lowest responsive and responsible bidder.

ENVIRONMENTAL:

Staff has determined that the subject project consists of operation, repair, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that previously existing. Additionally, the project provides for demolition and replacement of existing structures and facilities where the new structure will be located on the same site and have the same purpose and capacity as the structure replaced; and construction and location of limited numbers of new, small facilities or structures, installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another. Therefore, the project is exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Article III, Section I, Classes 1(13), 2(3) and 3(6) of the City CEQA Guidelines. A Notice of Exemption (NOE) that included the development elements of the project was prepared and filed with the Los Angeles City Clerk on April 16, 2014, and the Los Angeles County Clerk on April 18, 2014.

FISCAL IMPACT STATEMENT:

The project will be funded by a combination of the aforementioned funding sources. There is no immediate fiscal impact to the Department's General Fund. However, operations and maintenance costs will be evaluated and included in future Department budget requests. As the project will replace an existing, outdated facility with a new facility of similar size and utilization, operation and maintenance costs are anticipated to be similar to, or less than, that of the existing facility.

This report was prepared by Willis Yip, Project Manager, Architectural Division, Department of Public Works, Bureau of Engineering (BOE), and was reviewed by Neil Drucker, Program Manager, BOE Recreational and Cultural Facilities Program, BOE Recreational and Cultural facilities Program; Deborah Weintraub, Chief Deputy City Engineer; and Cathie Santo Domingo, Superintendent, Department of Recreation and Parks, Planning, Construction, and Maintenance Branch.

CITY OF LOS ANGELES
GUIDELINES FOR EVALUATION OF THE BUSINESS INCLUSION PROGRAM
(BIP) OUTREACH CHECKLIST

Bidder: Royal Construction Corp. Bid Date: 08/19/2014

Project Name: Woodland Hills Recreation Center – Park Renovation W.O. #: E1907454

Indicator	Required Documentation	Description of Submitted or Missing Documentation	Credit ✓
2 Pre-Bid Meeting	a) Attend pre-bid meeting and be listed on the attendance sheet, or b) Submit a letter either by e-mail, mail, or fax to the Bureau of Engineering, Project Award and Control (PAC) on certifying it is informed of the BIP project requirements and has participated in a City-sponsored or City approved matchmaking event in the past 12 months. Note: If the RFB states that the pre-bid meeting is mandatory, then attendance at the pre-bid meeting is the only way to pass this indicator.		✓
3 Work Areas	Proof of this must be demonstrated in Indicator 4. The notification must be performed using the BAVN's BIP Outreach Reports system.	(Automatic after meeting Indicator 4 requirements)	✓
4 Written Notice to Sub-contractors	E-mail or fax notification in each of the selected potential work areas to available MBEs, WBEs, SBEs, EBEs, DVBEs, and OBEs for each anticipated work area to be performed. The notification must be performed using the BAVN's BIP Outreach Reports system. The notification may be to potential sub-bidders/ subcontractors either currently registered on the BAVN or added to the BAVN by the bidder. Letters must contain areas of work selected to be subcontracted, City of Los Angeles project name, name of the bidder, and contact person's name, address, and telephone number. Bidders are required to send notifications to a sufficient number of firms in each potential sub work area as determined by the City. Typically, the sufficient number of firms is determined by the total number of potential sub-bidders/ subcontractors in each sub work area.		✓
5 Plans, specifications and requirements	Include, in Indicator 4, information detailing how, where, and when the bidder will make the required information available to interested potential sub-bidders/ subcontractors. The notification must be performed using the BAVN's BIP Outreach Reports system.	(Automatic after meeting Indicator 4 requirements)	✓
6 Negotiate in Good Faith	a) Copies of all potential MBE/WBE/SBE/EBE/DVBE/OBE bids or quotes received must be submitted prior to award of a contract; and b) Online Summary Sheet must be completed, listing the bids or quotes received, the name of the sub-bidder/ subcontractor who submitted the bid or quote, and a brief reason given for selection/ non-selection of each subcontractor. The reasons for selection/non-selection should be included in the Notes section of the online Summary Sheet. If the bidder elects to perform a listed work area with its own forces, they must include a bid/ quote for comparison purposes and an explanation must be provided and included on the Summary Sheet. All bids/ quotes received, regardless of whether or not the bidder outreached to the sub-bidder/ subcontractor, must be submitted. To this extent, the City expects the bidder to submit a bid/ quote from each sub-bidder/ subcontractor listed on the Summary Sheet. The Summary Sheet must be performed using the BAVN's BIP Outreach Reports system and must be submitted by 4:30 p.m. the following City working day after the date bids are received by the Board of Public Works. If a bid/quote is submitted by a sub-bidder/subcontractor that is not registered on the BAVN, the contractor is required to add that firm to their Summary Sheet.		✓
7 Bonds	Include, in Indicator 4, information about the bidder's efforts to assist with bonds, lines of credit, and insurance. The notification must be performed using the BAVN's BIP Outreach Reports system.	(Automatic after meeting Indicator 4 requirements)	✓

Prime % = 30.02%

MBE%= 0.5% WBE%= 0% S BE%= 0.73% EBE%= 0% DVBE%= 0% OBE%= 52.60%

RESPONSIVE

ATTACHMENT A

Bid Protest by Feldman & Associates, Inc.,
legal counsel for AWI Builders, Inc. (AWI)

FELDMAN & ASSOCIATES, INC.

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September 2, 2014

VIA HAND DELIVERY & E-MAIL

Board of Recreation and Park Commissioners
C/O LaTonya D. Dean
221 N. Figueroa Street
Suite 1510
Los Angeles, CA
latonya.dean@lacity.org

Re: AWI Builders, Inc. ("AWI")/Woodland Hills Recreation Center
Bid Protest: Parks Renovation – W.O. # E1907454

Dear Board of Recreation and Park Commissioners ("Board"):

On behalf of AWI, we are submitting this Protest of Royal Construction, Inc.'s ("Royal") bid on the Woodland Hills Recreation Center Parks Renovation Project – W.O. #E1907454 ("Project"). Courts allow public entities to exercise broad discretion in rejecting bids. (*Stanley-Taylor Co. v. Board of Supervisors* (1902) 135 C 486.) For the reasons below, Royal's bid ought to be rejected because Royal is not the lowest responsible and responsive bidder.

I. Royal Is Not The Lowest Responsible Bidder

A "responsible bidder" is defined as a bidder who has demonstrated the attributes of trustworthiness as well as quality, fitness, capacity, and experience to satisfactorily perform a public works contract. (*Public Contract Code ("PCC")* § 1103.) To be responsible, the lowest bidder's offer must best respond in quality, fitness, and capacity to the particular requirements of the proposed work. (2 Dillon, *Commentaries on the Law of Municipal Corporations* § 811 (5th Ed. 1911.)

The Supplementary General Requirements GR-S3 state:

In order for a bid to be considered eligible for this project, the prime contractor must have completed at least three (3) public recreation facilities of \$8 million or greater each for government agencies in the past six (6) years. (Emphasis added.)

The history that Royal submitted for this project is inadequate on its face. First, the Siqueiros Mural Protective Shelter is valued at only \$6,600,000 – well under the \$8,000,000

threshold. Neither is it a recreation facility or community center. Second, the Los Angeles Zoo Reptile Exhibit is not a community center. Third, the Pacoima Neighborhood City Hall is neither a community center nor a gymnasium.

Royal does not meet the experience required by GR-S3, or the requirement to list three recreation facility projects valued at more than \$8,000,000. Thus, Royal's bid does not meet the quality, fitness, and capacity threshold necessary for the particular requirements of the proposed work – a recreation center.

II. Royal's Bid Is Not Responsive

A bid is responsive if it promises to do what the bidding instructions demand. (*D.H. Williams Const., Inc. v. Clovis Unified School Dist.* (2007) 146 Cal.App.4th 757,764, citing *Taylor Bus. Service v. San Diego Bd. of Educ.* (1987) 195 Cal.App.3d 1331.) Royal's bid is non-responsive because it fails to identify qualified licensed subcontractors, and Royal is not qualified to self-perform their work.

1. Royal Listed a Subcontractor with a Suspended License: Suri Steel, Inc.

Royal listed Suri Steel, Inc., license #945739. (Ex. "A") However, the license detail provided from the CSLB's website shows that this entity's license is suspended for a lack of workers compensation, and has been without coverage since July 20, 2014.

First, permitting Royal to list a subcontractor with a suspended license, and then substitute that subcontractor for another post bid, would encourage contractors to list subcontractors with a suspended license.

Second, this practice would place Royal at an unfair advantage. Royal could lowball its price by listing a subcontractor with a suspended license (i.e. Suri Steel, Inc.) Then, Royal could dodge liability to the listed subcontractor (Suri Steel, Inc.), and either substitute or self-perform the work. This would defeat the purpose behind competitive bidding, which is to enhance competition and prevent corruption and undue influence. (*Miller v. McKinnon* (1942) 10 C2d 83, 88.)

Third, it would also encourage the very sort of bid shopping and bid peddling that is prohibited by the clear letter and policy of California's Subletting and Subcontractor Fair Practices Act (the "Act"). (*PCC § 4101 et. seq.*) Royal would be free to list a subcontractor with a suspended license, and then bid shop the subcontract around for a favorable substitute after being awarded the contract. The rule that no subcontractor can be added after bid day was set by the California legislature and courts have repeatedly applied it to this exact situation. The Act requires that the general contractor self-perform all work not assigned to subcontractors in the bid regardless of how the subsequent listing is revised. (*See PCC § 4107; and R. M. Sherman Co. v. W.R. Thomason, Inc.* (1987) 191 Cal.App.3d 559, 563.)

Last, Royal could not self-perform the work assigned to Suri Steel, Inc. Royal is not properly licensed to self-perform and fabricate the structural steel required for the Project. Royal

only possess a B classification. A C-51 license is required for fabrication unless the fabricator possesses a City of LA Fabricators license. To the best of our knowledge, Royal does not.

2. Royal's Fire Protection Subcontractor Does Not Meet Bid Experience Qualifications

Royal listed Baseline Fire Protection ("Baseline"), license #995049 to perform the fire sprinkler work. Specification 210000, 1.3 requires that the contractor must (1) have successfully installed fire systems of comparable size, type, and design, as specified; (2) must prove that they have installed two systems; and (3) shall certify that each system has performed satisfactorily for one year.

Baseline does not meet the minimum experience qualifications. Baseline acquired its license on July 23, 2014. (Ex. "B": Baseline's license detail, Baseline's proposal submission, and Specification 210000, 1.3.) Royal listed a subcontractor that does not meet the experience qualification mandated by the bid.

3. Royal Did Not List an Asbestos Removal Subcontractor

As explained above, Royal would have to self-perform any work where it failed to list a subcontractor. (See *PCC* § 4107; and *R. M. Sherman Co.* at 563.) However, Title 8 CCR § 1529 only permits a contractor to remove up to 100 square feet of asbestos. The Project contains more than 100 square feet of asbestos. This exceeds the amount that is allowed to be self-performed by a contractor without the required asbestos removal certification and license. (Ex. "C": asbestos removal required per bid; 8 CCR § 1529.)

4. Royal Erroneously Listed HUR Flooring

Royal listed CSLB License No. 604927 for HUR Flooring. This is the license number for Beth Hakes Interiors, which is expired. Either Royal listed the wrong subcontractor or the wrong license number. If Royal listed the wrong subcontractor, then at best, Royal would have to self-perform any work where it failed to list a subcontractor. (See *PCC* § 4107; and *R. M. Sherman Co.* at 563.) Royal must demonstrate that it meets the installation requirements per the specifications. Section 096466 1.05 B, and C require an experienced installer who has completed wood athletic flooring similar in material, design, etc., and having been approved by MFMA. (Ex. "D".) It is doubtful that Royal meets this qualification. If Royal made a clerical error, then it should withdraw its bid. (*PCC* § 5103.)

5. Crown Electrical's Qualifications

The Board should verify whether Crown Electrical ("Crown") is registered on the LABVN website. Second, the CSLB website shows that Crown acquired its license on June 18, 2013. Crown's experience and qualifications should be carefully reviewed. (Ex. "E".)

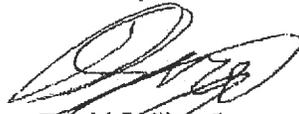
Conclusion

Here, Royal has not met the experience qualifications required by GR-S3. Royal listed a subcontractor with a suspended license (Suri Steel, Inc.). Permitting substitution would violate the spirit and letter of the Act, and Royal is not qualified to self-perform Suri Steel, Inc.'s work. Royal's fire protection subcontractor is unqualified. An asbestos subcontractor was not listed and Royal is unqualified to perform this work. There is an error with listing HUR Flooring or its license, and Crown appears not to be listed on LABVN and unqualified.

The errors and irregularities identified in Royal's bid are of a substantial nature. Overlooking them would give Royal an unfair advantage, and the Project would be performed by a contractor and subcontractors who are unqualified. The Board ought to use its broad discretion to reject Royal's bid. Since Environmental Construction, Inc.'s bid was deemed non-responsive, AWI is the lowest responsible and responsive bidder.

Thank you in advance for your review of this Protest letter and enclosures. If you have any questions, do not hesitate to contact Mark Feldman, who is copied here, or the undersigned.

Sincerely,



David J. Sire, Jr.
for FELDMAN & ASSOCIATES, INC.

Encl.: Exhibits "A" - "E" noted above.

Cc: Mark A. Feldman, Esq.; AWI Builders, Inc.

EXHIBIT "A"



DEPARTMENT OF CONSUMER AFFAIRS

Contractors State License Board

Contractor's License Detail - License # 945739

 **DISCLAIMER:** A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

- CSLB complaint disclosure is restricted by law ([B&P 7124.6](#)) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
- Per [B&P 7071.17](#), only construction related civil judgments reported to the CSLB are disclosed.
- Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
- Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

License Number	945739	Extract Date	8/21/2014
SURI STEEL INC			
Business Information	Business Phone Number: (323) 231-2486		
	5851 TOWNE AVENUE LOS ANGELES, CA 90003		
Entity	Corporation		
Issue Date	04/16/2010		
Reissue Date	03/29/2013		
Expire Date	03/31/2015		

SUSPENDED

This License is under suspension for the following reasons:

- License Status
1. License is under suspension for failure to comply with Workers Comp. A workers' compensation certificate or exemption statement may have been received by the Board but not yet processed. Once the certificate or exemption statement is processed the suspension will be lifted retroactively to the effective date of the certificate or exemption statement. Ask the contractor for proof of worker's compensation and contact the insurance company to verify coverage.

Classifications	CLASS	DESCRIPTION
	C51	<u>STEEL STRUCTURAL</u>

CONTRACTOR'S BOND

This license filed a Contractor's Bond with
AMERICAN CONTRACTORS INDEMNITY COMPANY.

Bond Number: 100216886

8/21/2014

Check a License - License Detail - Contractors State License Board

Bonding

Bond Amount: \$12,500

Effective Date: 03/29/2013

Contractor's Bond History

BOND OF QUALIFYING INDIVIDUAL

1. The Responsible Managing Officer (RMO) CARTIN OMODEO MARCO ANTONIO certified that he/she owns 10 percent or more of the voting stock/equity of the corporation. A bond of qualifying individual is not required.

Effective Date: 03/29/2013

Workers' Compensation

WORKERS' COMPENSATION

This license has workers compensation insurance with STATE COMPENSATION INSURANCE FUND

Policy Number: 9018967

Effective Date: 07/20/2012

Expire Date: 07/20/2014

Workers' Compensation History

Miscellaneous Information

DATE	DESCRIPTION
03/29/2013	LICENSE REISSUED TO ANOTHER ENTITY

Personnel List

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EXHIBIT "B"



DEPARTMENT OF CONSUMER AFFAIRS

Contractors State License Board**Contractor's License Detail - License # 995049**

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

- CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
- Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
- Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
- Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

License Number	995049	Extract Date	8/21/2014
BASE LINE FIRE PROTECTION INC			
Business Information	Business Phone Number: (562) 291-8252		
	8024 COLE STREET DOWNEY, CA 90242		
Entity	Corporation		
Issue Date	07/23/2014		
Expire Date	07/31/2016		
License Status	ACTIVE		
	This license is current and active. All information below should be reviewed.		
Additional Information	The license may be suspended at a future date for failure to comply with one or more provisions of law.		
Classifications	CLASS	DESCRIPTION	
	C16	FIRE PROTECTION CONTRACTOR	
Bonding	CONTRACTOR'S BOND		
	This license filed a Contractor's Bond with AMERICAN CONTRACTORS INDEMNITY COMPANY.		
	Bond Number: 100246320		
	Bond Amount: \$12,500		
	Effective Date: 04/17/2014		
	BOND OF QUALIFYING INDIVIDUAL		
	1. The Responsible Managing Officer (RMO) AHMED ZUBAIR certified that he/she		

8/21/2014

Check a License - License Detail - Contractors State License Board

owns 10 percent or more of the voting stock/equity of the corporation. A bond of qualifying individual is not required.

Effective Date: 07/23/2014

WORKERS' COMPENSATION

Workers' Compensation

This license is exempt from having workers compensation insurance; they certified that they have no employees at this time.

Effective Date: 04/15/2014

Expire Date: None

Personnel listed on this license (current or disassociated) are listed on other licenses.

[Personnel List](#)

[Other Licenses](#)

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C. Installer Requirements:

1. The contractor shall submit the following for verification of qualifications: Prior to installation, submit documentation to the Owner showing that the contractor has successfully installed fire protection systems of comparable size, type and design as specified herein or that the contractor has a firm contracted agreement with a subcontractor having such experience. The data shall include the names and locations of at least two installations where the contractor, or subcontractor installed such systems. The contractor, or subcontractor, shall certify that each system has performed satisfactorily for a period of not less than one year.

1.4 PRODUCT HANDLING

- A. Protection: Take all precautions necessary to protect the materials of the Section before, during and after installation.
- B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Architect and at no additional cost to the Owner.

1.5 SUBMITTALS

- A. Shop Drawings: Submit shop drawings and materials brochures to the Architect in accordance with the provisions of Division 1 of these specifications.
- B. Operation and Maintenance Manuals: Deliver operating instructions, maintenance instructions and brochures for equipment to the Architect in accordance with the provisions of Division 1 of these specifications. Instructions to the Owner's operating personnel and demonstration of performance, operation and maintenance of equipment and systems shall be a part of these obligations.
- C. Record Drawings: Maintain complete record drawings in accordance with provisions of Division 1 of these specifications. The record drawings shall show the system as installed, including all deviations from both the project drawings and the approved shop drawings.

1.6 MISCELLANEOUS

- A. Examination of the Site: Exercise care in examining the site and coordinate all work with other trades. Correct conditions which will prevent proper provisions of this work. Verify depth and location of service lines with servicing companies having jurisdiction before excavating. By submission of the bid, the contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required by the contract documents at no additional cost to the Owner.
- B. Permits and Fees: Arrange and pay for all permits, inspections and fees required by all governing agencies. Deliver all certificates to the Architect.
- C. Drawings: Coordinate all space requirements with other trades. Coordinate sprinkler pipe routing with structural conditions and mechanical ductwork, and indicate such coordination on the drawings. Coordinate sprinkler head locations with lights, grilles and reflected ceiling plans.

1.7 GUARANTEE

- A. The contractor shall guarantee labor, materials and equipment provided under this contract against defects in accordance with the provisions of Division 1 of these specifications.

1.8 DESIGN AND PERFORMANCE

- A. System design and installation shall conform to:
 1. NFPA 13, 24, and other applicable NFPA standards, currently implemented editions.
 2. Insurance Underwriter's Regulations.
 3. All Applicable Building Codes adopted by the Authorities Having Jurisdiction as of the date of permitting of the work.
 4. Local Ordinances
 5. Requirements of the State Fire Marshall
 6. Requirements of the City of Los Angeles.

BASE LINE



L/c. #996049

FIRE PROTECTION, INC.

8024 Goto St., Downey, CA 90242 * Tel.: 562-291-8252 * Fax: 562-381-2152 * email: BaseLineFire@yahoo.com

Date: 8-19-2014

PROJECT:

Woodland Hills Recreation Center
5858 Shoup Ave.
Los Angeles, CA 91367

PROSPECTIVE GC:

Attn, Estimating

Base Line Fire Protection Inc. is pleased to submit for your consideration the following proposal, all material, labor, design and installation of a wet Automatic Fire Sprinkler System for the above mentioned project per plans and specifications. This proposal is based on adequate water supply.

SCOPE OF WORK: The hydraulic design and installation of a wet Fire sprinkler System. Fire sprinklers to be chrome recessed center line of tile, 1/4 point in 2x4 T-bar ceiling and brass SSU in exposed ceiling. All design and installation to conform to NFPA 13 and local fire department and requirements. Submit Fire Sprinkler plans to the authority having jurisdiction for plan check and approvals. The price to include design, material, installation, inspections and all associated taxes. Work to start 6" above finish floor inside buildings. Price to include prevailing wages. Addendums 1 & 2 acknowledged.

Total Price: \$ 53,250.00

Alt # 1 (Fire line, 5' stub-in) \$ 5,500.00

WORK EXCLUSIONS: Life and safety, Electrical wiring of any kind, masking, patching and painting of pipe and access panels.

Thank you for this opportunity. This proposal is Valid for 30 days, and should be a part of the contract documents.

Respectfully

Guillermo Troncoso

EXHIBIT "C"

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at http://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 4. Construction Safety Orders

Article 4. Dusts, Fumes, Mists, Vapors, and Gases

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§1529. Asbestos.

(a) Scope and application.

(1) This section regulates asbestos exposure in all construction work as defined in Section 1502 including but not limited to the following:

(A) Demolition or salvage of structures where asbestos is present;

(B) Removal or encapsulation of materials containing asbestos;

(C) Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos;

(D) Installation of products containing asbestos;

(E) Asbestos spill/emergency cleanup;

(F) Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed;

(G) Excavation which may involve exposure to asbestos as a natural constituent which is not related to asbestos mining and milling activities;

(H) Routine facility maintenance; and

(I) Erection of new electric transmission and distribution lines and equipment, and alteration, conversion and improvement of the existing transmission and distribution lines and equipment.

(2) Whenever employee exposures to asbestos, as defined in subsection (b) of this section consist only of exposure to tremolite, anthophyllite, and actinolite in the nonasbestiform mineral habit, the provisions of Section 5208.1 shall apply.

(3) The provisions of this section are subject to the requirements of the Occupational Carcinogen Control Act of 1976 (Labor Code, Division 5, Part 10).

(4) Coverage under this Section shall be based on the nature of the work operation involving asbestos exposure.

(b) Definitions.

“Aggressive-method” means removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

“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 material (ACM)”, means any material containing more than one percent asbestos.

“Assistant Secretary” means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

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

“Building/facility owner” is the legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which activities covered by this standard take place.

“Certified Industrial Hygienist (CIH)” means one certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

“Chief” means the Chief of the Division of Occupational Safety and Health, P.O. Box 420603, San Francisco, CA 94142.

“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 ACM and PACM, is likely to 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.

“Closely resemble” means that the major workplace conditions which have contributed to the levels of historic asbestos exposure, are no more protective than conditions of the current workplace.

“Competent person” means, in addition to one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them, 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: in addition, for Class I and Class II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR part 763) for supervisor, or its equivalent and, for Class III 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). Note: For operations involving more than 100 square feet of asbestos containing construction material as defined in subsection (r) of this section the competent person may fulfill the requirement contained in Section 341.9 to specify a certified supervisor for asbestos related work.

“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.

“Decontamination area” means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

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

“Director” means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

“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. 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 in order 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.

“Fiber” means a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

“Glovebag” means an impervious plastic bag-like enclosure affixed around not more than a 60 x 60 inch 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.

“Industrial hygienist” means a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards.

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

“Modification” for purposes of subsection (g)(6), means a changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system is not a “modification” for purposes of subsection (g)(6) of this section.

“Negative Initial Exposure Assessment” means a demonstration by the employer, which complies with the criteria in subsection (f)(2)(C) of this section, that employee exposure during an operation is expected to be consistently below the PELs.

“PACM” means “presumed asbestos-containing material”.

“Presumed Asbestos Containing Material” means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as “PACM” may be rebutted pursuant to subsection (k)(5) of this section.

“Project Designer” means a person who has successfully completed the training requirements for an abatement project designer established by 40 U.S.C. Sec. 763.90(g).

“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. Requirements for regulated areas are set out in subsection (e) of this section.

“Removal” means all operations where ACM 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, breeching, 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.

(c) Permissible exposure limits (PELS).

(1) Time-weighted average limit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight (8) hour time-weighted average (TWA), as determined by the method prescribed in Appendix A to this section, or by an equivalent method.

(2) Excursion limit. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes, as determined by the method prescribed in Appendix A to this section, or by an equivalent method.

(d) Multi-employer worksites.

(1) On multi-employer worksites, an employer performing work requiring the establishment of a regulated area shall inform other employers on the site of the nature of the employer's work with asbestos and/or PACM, of the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees of such other employers are not exposed to asbestos.

(2) Asbestos hazards at a multi-employer work site shall be abated by the contractor who created or controls the source of asbestos contamination. For example, if there is a significant breach of an enclosure containing Class I work, the employer responsible for erecting the enclosure shall repair the breach immediately.

(3) In addition, all employers of employees exposed to asbestos hazards shall comply with applicable protective provisions to protect their employees. For example, if employees working immediately adjacent to a Class I asbestos job are exposed to asbestos due to the inadequate containment of such job, their employer shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to subsection (f) of this section.

(4) All employers of employees working adjacent to regulated areas established by another employer on a multi-employer work-site, shall take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on by the primary asbestos contractor to assure that asbestos

fibers do not migrate to such adjacent areas.

(5) All general contractors on a construction project which includes work covered by this standard shall be deemed to exercise general supervisory authority over the work covered by this standard, even though the general contractor is not qualified to serve as the asbestos "competent person" as defined by subsection (b) of this section. As supervisor of the entire project, the general contractor shall ascertain whether the asbestos contractor is in compliance with this standard, and shall require such contractor to come into compliance with this standard when necessary.

(e) Regulated areas.

(1) All Class I, II and III asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of subsections (2), (3), (4), and (5) of this subsection.

(2) 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. Signs shall be provided and displayed pursuant to the requirements of subsection (k)(7) of this section.

(3) Access. Access to regulated areas shall be limited to authorized persons and to persons authorized by the Chief or Director.

(4) Respirators. All persons entering a regulated area where employees are required pursuant to subsection (h)(1) of this section to wear respirators shall be supplied with a respirator selected in accordance with subsection (h)(2) of this section.

(5) Prohibited activities. The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.

(6) Competent Persons. The employer shall ensure that all asbestos work performed within regulated areas is supervised by a competent person, as defined in subsection (b) of this section. The duties of the competent person are set out in subsection (o) of this section.

(f) Exposure assessments and monitoring.

(1) General monitoring criteria.

(A) Each employer who has a workplace or work operation where exposure monitoring is required under this section shall perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed.

(B) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee.

(C) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30 minute exposures associated with operations that are most likely to produce exposures above the excursion limit for employees in each work area.

(2) Initial Exposure Assessment.

(A) Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly.

(B) Basis of Initial Exposure Assessment: Unless a negative exposure assessment has been made pursuant to subsection (f)(2)(C) of this section, the initial exposure assessment shall, if feasible, be based on monitoring conducted pursuant to subsection (f)(1)(C) of this section. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the employer which indicate the levels of airborne asbestos likely to be encountered on the job. For Class I asbestos work, until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise makes a negative exposure assessment pursuant to subsection (f)(2)(C) of this section, the employer shall presume that employees are exposed in excess of the TWA and excursion limit.

(C) Negative Exposure Assessment: For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria;

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the

processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or

3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

(3) Periodic monitoring

(A) Class I and II operations. The employer shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area who is performing Class I or II work, unless the employer pursuant to subsection (f)(2)(C) of this section, has made a negative exposure assessment for the entire operation.

(B) All operations under the standard other than Class I and II operations. The employer shall conduct periodic monitoring of all work where exposures are expected to exceed a PEL, at intervals sufficient to document the validity of the exposure prediction.

(C) Exception: When all employees required to be monitored daily are equipped with supplied-air respirators operated in the pressure demand mode, or other positive pressure mode respirator, the employer may dispense with the daily monitoring required by this subsection. However, employees performing class I work using a control method which is not listed in subsection (g)(4)(A), (B), or (C) of this section or using a modification of a listed control method, shall continue to be monitored daily even if they are equipped with supplied-air respirators.

(4) Termination of monitoring. (A) If the periodic monitoring required by subsection (f)(3) of this section reveals that employee exposures, as indicated by statistically reliable measurements, are below the permissible exposure limit and excursion limit the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

(B) Additional monitoring. Notwithstanding the provisions of subsections (f)(2), (f)(3), and (f)(4) of this section, the employer shall institute the exposure monitoring required under subsection (f)(3) of this section whenever there has been a change in process, control equipment, personnel or work practices that may result in new or additional exposures above the permissible exposure limit and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the permissible exposure limit and/or excursion limit. Such additional monitoring is required regardless of whether a "negative exposure assessment" was previously produced for a specific job.

(5) Employee Notification of Monitoring Results.

(A) As soon as possible but not later than 5 working days following receipt of monitoring results required by this section, the employer shall notify affected employees of the monitoring results.

(B) The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees.

(C) The written notification required by subsection (f)(5)(A) of this section shall include the corrective

action being taken by the employer to reduce employee exposure to or below the PEL and/or excursion limit wherever monitoring results have indicated that the PEL and/or excursion limit has been exceeded.

(6) Observation of monitoring.

(A) The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section.

(B) When observation of the monitoring of employee exposure to asbestos requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(g) Methods of compliance

(1) Engineering controls and work practices for all operations covered by this section. The employer shall use the following engineering controls and work practices in all operations covered by this section, regardless of the levels of exposure:

(A) Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM and PACM, except as provided in subsection (g)(8)(B) of this section in the case of roofing material.

(B) Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in subsection (g)(8)(B) of this section; and

(C) Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in subsection (g)(8)(B) of this section apply.

(2) In addition to the requirements of subsection (g)(1) of this section, the employer shall use the following control methods to achieve compliance with the TWA permissible exposure limit and excursion limit prescribed by subsection (c) of this section;

(A) Local exhaust ventilation equipped with HEPA filter dust collection systems;

(B) Enclosure or isolation of processes producing asbestos dust;

(C) Ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter;

(D) Use of other work practices and engineering controls that the Assistant Secretary can show to be feasible.

(E) Wherever the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the permissible exposure limit and/or excursion limit prescribed in

subsection (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of subsection (h) of this section.

(3) Prohibitions. The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM or PACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

(A) High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

(B) Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

(C) Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM.

(D) Employee rotation as a means of reducing employee exposure to asbestos.

(4) Class I Requirements. In addition to the provisions of subsections (g)(1) and (2) of this section, the following engineering controls and work practices and procedures shall be used.

(A) All Class I work, including the installation and operation of the control system shall be supervised by a competent person as defined in subsection (b) of this section;

(B) For all Class I jobs involving the removal of more than 25 linear or 10 square feet of thermal system insulation or surfacing material; for all other Class I jobs, where the employer cannot produce a negative exposure assessment pursuant to subsection (f)(2)(C) of this section, or where employees are working in areas adjacent to the regulated area, while the Class I work is or being performed, the employer shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area:

1. Critical barriers shall be placed over all the openings to the regulated area, except where activities are performed outdoors; or
2. The employer shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area surveillance during each work shift at each boundary of the regulated area, showing no visible asbestos dust; and perimeter area monitoring showing that clearance levels contained in 40 CFR Part 763, Subpart E, of the EPA Asbestos in Schools Rule are met, or that perimeter area levels, measured by Phase Contrast Microscopy (PCM) are no more than background levels representing the same area before the asbestos work began. The results of such monitoring shall be made known to the employer no later than 24 hours from the end of the work shift represented by such monitoring.

Exception: For work completed outdoors where employees are not working in areas adjacent to the regulated areas, this subsection (g)(4)(B) is satisfied when the specific control methods in subsection (g)(5) of this section are used.

(C) For all Class I jobs, HVAC systems shall be isolated in the regulated area by sealing with a double layer of 6 mil plastic or the equivalent; (D) For all Class I jobs, impermeable dropcloths shall be placed on surfaces beneath all removal activity;

(E) For all Class I jobs, all objects within the regulated area shall be covered with impermeable dropcloths or plastic sheeting which is secured by duct tape or an equivalent.

(F) For all Class I jobs where the employer cannot produce a negative exposure assessment, or where exposure monitoring shows that a PEL is exceeded, the employer shall ventilate the regulated area to move contaminated air away from the breathing zone of employees toward a HEPA filtration or collection device.

(5) Specific control methods for Class I work. In addition, Class I asbestos work shall be performed using one or more of the following control methods pursuant to the limitations stated below:

(A) Negative Pressure Enclosure (NPE) systems: NPE systems may be used where the configuration of the work area does not make the erection of the enclosure infeasible, with the following specifications and work practices.

1. Specifications:

- a. The negative pressure enclosure (NPE) may be of any configuration,
- b. At least 4 air changes per hour shall be maintained in the NPE,
- c. A minimum of -0.02 column inches of water pressure differential, relative to outside pressure, shall be maintained within the NPE as evidenced by manometric measurements,
- d. The NPE shall be kept under negative pressure throughout the period of its use, and
- e. Air movement shall be directed away from employees performing asbestos work within the enclosure, and toward a HEPA filtration or a collection device.

2. Work Practices:

- a. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches and smoke- tested for leaks, and any leaks sealed.
- b. Electrical circuits in the enclosure shall be deactivated, unless equipped with ground-fault circuit interrupters.

(B) Glove bag systems may be used to remove PACM and/or ACM from straight runs of piping and elbows and other connections with the following specifications and work practices:

1. Specifications:

- a. Glovebags shall be made of 6 mil thick plastic and shall be seamless at the bottom.

b. Glovebags used on elbows and other connections must be designed for that purpose and used without modifications.

2. Work Practices:

a. Each glovebag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be done.

b. Glovebags shall be smoke-tested for leaks and any leaks sealed prior to use.

c. Glovebags may be used only once and may not be moved.

d. Glovebags shall not be used on surfaces whose temperature exceeds 150 °F.

e. Prior to disposal, glovebags shall be collapsed by removing air within them using a HEPA vacuum.

f. Before beginning the operation, loose and friable material adjacent to the glovebag/box operation shall be wrapped and sealed in two layers of six mil plastic or otherwise rendered intact.

g. Where system uses attached waste bag, such bag shall be connected to collection bag using hose or other material which shall withstand pressure of ACM waste and water without losing its integrity:

h. Sliding valve or other device shall separate waste bag from hose to ensure no exposure when waste bag is disconnected:

i. At least two persons shall perform Class I glovebag removal operations.

(C) Negative Pressure Glove Bag Systems. Negative pressure glove bag systems may be used to remove ACM or PACM from piping.

1. Specifications: In addition to specifications for glove bag systems above, negative pressure glove bag systems shall attach HEPA vacuum systems or other devices to bag to prevent collapse during removal.

2. Work Practices:

a. The employer shall comply with the work practices for glove bag systems in subsection (g)(5)(B)2.d. of this section.

b. The HEPA vacuum cleaner or other device used to prevent collapse of bag during removal shall run continually during the operation until it is completed at which time the bag shall be collapsed prior to removal of the bag from the pipe.

c. Where a separate waste bag is used along with a collection bag and discarded after one use, the collection bag may be reused if rinsed clean with amended water before reuse.

(D) Negative Pressure Glove Box Systems: Negative pressure glove boxes may be used to remove ACM or PACM from pipe runs with the following specifications and work practices.

1. Specifications:

- a. Glove boxes shall be constructed with rigid sides and made from metal or other material which can withstand the weight of the ACM and PACM and water used during removal:
- b. A negative pressure generator shall be used to create negative pressure in the system:
- c. An air filtration unit shall be attached to the box:
- d. The box shall be fitted with gloved apertures:
- e. An aperture at the base of the box shall serve as a bagging outlet for waste ACM and water:
- f. A back-up generator shall be present on site:
- g. Waste bags shall consist of 6 mil thick plastic double-bagged before they are filled or plastic thicker than 6 mil.

2. Work practices:

- a. At least two persons shall perform the removal:
- b. The box shall be smoke-tested for leaks and any leaks sealed prior to each use.
- c. Loose or damaged ACM adjacent to the box shall be wrapped and sealed in two layers of 6 mil plastic prior to the job, or otherwise made intact prior to the job.
- d. A HEPA filtration system shall be used to maintain pressure barrier in box.

(E) Water Spray Process System. A water spray process system may be used for removal of ACM and PACM from cold line piping if, employees carrying out such process have completed a 40-hour separate training course in its use, in addition to training required for employees performing Class I work. The system shall meet the following specifications and shall be performed by employees using the following work practices.

1. Specifications:

- a. Piping shall be surrounded on 3 sides by rigid framing,

b. A 360 degree water spray, delivered through nozzles supplied by a high pressure separate water line, shall be formed around the piping.

c. The spray shall collide to form a fine aerosol which provides a liquid barrier between workers and the ACM and PACM.

2. Work Practices:

a. The system shall be run for at least 10 minutes before removal begins.

b. All removal shall take place within the water barrier.

c. The system shall be operated by at least three persons, one of whom shall not perform removal, but shall check equipment, and ensure proper operation of the system.

d. After removal, the ACM and PACM shall be bagged while still inside the water barrier.

(F) A small walk-in enclosure which accommodates no more than two persons (mini-enclosure) may be used if the disturbance or removal can be completely contained by the enclosure with the following specifications and work practices.

1. Specifications:

a. The fabricated or job-made enclosure shall be constructed of 6 mil plastic or equivalent:

b. The enclosure shall be placed under negative pressure by means of a HEPA filtered vacuum or similar ventilation unit:

2. Work practices:

a. Before use, the mini-enclosure shall be inspected for leaks and smoke tested to detect breaches, and any breaches sealed.

b. Before reuse, the interior shall be completely washed with amended water and HEPA-vacuumed.

c. During use, air movement shall be directed away from the employee's breathing zone within the mini-enclosure.

(6) Alternative control methods for Class I work. Class I work may be performed using a control method which is not referenced in subsection (g)(5) of this section, or which modifies a control method referenced in subsection (g)(5) of this section, if the following provisions are complied with:

(A) The control method shall enclose, contain or isolate the processes or source of airborne asbestos dust, or otherwise capture or redirect such dust before it enters the breathing zone of employees.

(B) A certified industrial hygienist or licensed professional engineer who is also qualified as a project designer as defined in subsection (b) of this section, shall evaluate the work area, the projected work practices and the engineering controls and shall certify in writing that the planned control method is adequate to reduce direct and indirect employee exposure to below the PELs under worst-case conditions of use, and that the planned control method will prevent asbestos contamination outside the regulated area, as measured by clearance sampling which meets the requirements of EPA's Asbestos in Schools rule issued under AHERA, or perimeter monitoring which meets the criteria in subsection (g)(4)(B)2. of this section.

1. Where the TSI or surfacing material to be removed is 25 linear or 10 square feet or less, the evaluation required in subsection (g)(6) of this section may be performed by a "competent person", and may omit consideration of perimeter or clearance monitoring otherwise required.

2. The evaluation of employee exposure required in subsection (g)(6) of this section, shall include and be based on sampling and analytical data representing employee exposure during the use of such method under worst-case conditions and by employees whose training and experience are equivalent to employees who are to perform the current job.

(7) Work Practices and Engineering Controls for Class II work.

(A) All Class II work, shall be supervised by a competent person as defined in subsection (b) of this section.

(B) For all indoor Class II jobs, where the employer has not produced a negative exposure assessment pursuant to subsection (f)(2)(C) of this section, or where during the job, changed conditions indicate there may be exposure above the PEL or where the employer does not remove the ACM in a substantially intact state, the employer shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area;

1. Critical barriers shall be placed over all openings to the regulated area; or,

2. The employer shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area monitoring or clearance monitoring which meets the criteria set out in subsection (g)(4)(B)2. of this section.

(C) Impermeable dropcloths shall be placed on surfaces beneath all removal activity;

(D) All Class II asbestos work shall be performed using the work practices and requirements set out above in subsection (g)(1)(A) through (C) of this section.

(8) Additional Controls for Class II work. Class II asbestos work shall also be performed by complying with the work practices and controls designated for each type of asbestos work to be performed, set out in this subsection. Where more than one control method may be used for a type of asbestos work, the employer may choose one or a combination of designated control methods. Class II work also may be performed using a method allowed for Class I work, except that glove bags and glove boxes are allowed if they fully enclose the Class II material to be removed.

(A) For removing vinyl and asphalt flooring materials which contain ACM or for which, in buildings constructed no later than 1980, the employer has not verified the absence of ACM pursuant to subsection (g)(8)(A)9. of this section. The employer shall ensure that employees comply with the following work practices and that employees are trained in these practices pursuant to subsection (k)(9) of this section:

1. Flooring or its backing shall not be sanded.
2. Vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) shall be used to clean floors.
3. Resilient sheeting shall be removed by cutting with wetting of the snip point and wetting during delamination. Rip-up of resilient sheet floor material is prohibited.
4. All scraping of residual adhesive and/or backing shall be performed using wet methods.
5. Dry sweeping is prohibited.
6. Mechanical chipping is prohibited unless performed in a negative pressure enclosure which meets the requirements of subsection (g)(5)(A) of this section.
7. Tiles shall be removed intact, unless the employer demonstrates that intact removal is not possible.
8. When tiles are heated and can be removed intact, wetting may be omitted.
9. Resilient flooring material including associated mastic and backing shall be assumed to be asbestos-containing unless an industrial hygienist determines that it is asbestos-free using recognized analytical techniques.

(B) For removing roofing material which contains ACM the employer shall ensure that the following work practices are followed:

1. Roofing material shall be removed in an intact state to the extent feasible.
2. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards.
3. Cutting machines shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety.
4. When removing built-up roofs with asbestos-containing roofing felts and an aggregate surface using a power roof cutter, all dust resulting from the cutting operation shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. When removing built-up roofs with asbestos containing roofing felts and a smooth surface using a power roof cutter, the dust resulting from the cutting operation shall be collected either by a

HEPA dust collector or HEPA vacuuming along the cut line, or by gently sweeping and then carefully and completely wiping up the still-wet dust and debris left along the cut line. The dust and debris shall be immediately bagged or placed in covered containers.

5. Asbestos-containing material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane or hoist:

a. 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.

b. Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift.

6. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust.

7. Roof level heating and ventilation air intake sources shall be isolated or the ventilation system shall be shut down.

8. Notwithstanding any other provision of this section, removal or repair of sections of intact roofing less than 25 square feet in area does not require use of wet methods or HEPA vacuuming as long as manual methods which do not render the material nonintact are used to remove the material and no visible dust is created by the removal method used. In determining whether a job involves less than 25 square feet, the employer shall include all removal and repair work performed on the same roof on the same day.

(C) When removing cementitious asbestos-containing siding and shingles or transite panels containing ACM on building exteriors (other than roofs, where subsection (g)(8)(B) of this section applies) the employer shall ensure that the following work practices are followed:

1. Cutting, abrading or breaking siding, shingles, or transite panels, shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release cannot be used.

2. Each panel or shingle shall be sprayed with amended water prior to removal.

3. Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.

4. Nails shall be cut with flat, sharp instruments.

(D) When removing gaskets containing ACM, the employer shall ensure that the following work practices

are followed:

1. If a gasket is visibly deteriorated and unlikely to be removed intact, removal shall be undertaken within a glovebag as described in subsection (g)(5)(B) of this section.
2. The gasket shall be immediately placed in a disposal container.
3. Any scraping to remove residue must be performed wet.

(E) When performing any other Class II removal of asbestos containing material for which specific controls have not been listed in subsections (g)(8)(A) through (D) of this section, the employer shall ensure that the following work practices are complied with.

1. The material shall be thoroughly wetted with amended water prior to and during its removal.
2. The material shall be removed in an intact state unless the employer demonstrates that intact removal is not possible.
3. Cutting, abrading or breaking the material shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release are not feasible.
4. Asbestos-containing material removed, shall be immediately bagged or wrapped, or kept wetted until transferred to a closed receptacle, no later than the end of the work shift.

(F) Alternative Work Practices and Controls. Instead of the work practices and controls listed in subsection (g)(8)(A) through (E) of this section, the employer may use different or modified engineering and work practice controls if the following provisions are complied with.

1. The employer shall demonstrate by data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used, that employee exposure will not exceed the PELs under any anticipated circumstances.
2. A competent person shall evaluate the work area, the projected work practices and the engineering controls, and shall certify in writing, that the different or modified controls are adequate to reduce direct and indirect employee exposure to below the PELs under all expected conditions of use and that the method meets the requirements of this standard. The evaluation shall include and be based on data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used for the current job, and by employees whose training and experience are equivalent to employees who are to perform the current job.

(9) Work Practices and Engineering Controls for Class III asbestos work. Class III asbestos work shall be conducted using engineering and work practice controls which minimize the exposure to employees performing the asbestos work and to bystander employees.

(A) The work shall be performed using wet methods.

(B) To the extent feasible, the work shall be performed using local exhaust ventilation.

(C) Where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking, or sawing of thermal system insulation or surfacing material, the employer shall use impermeable dropcloths, and shall isolate the operation using mini-enclosures or glove bag systems pursuant to subsection (g)(5) of this section or another isolation method.

(D) Where the employer does not produce a "negative exposure assessment" for a job, or where monitoring results show the PEL has been exceeded, the employer shall contain the area using impermeable dropcloths and plastic barriers or their equivalent, or shall isolate the operation using a control system listed in and in compliance with subsection (g)(5) of this section.

(E) Employees performing Class III jobs, which involve the disturbance of thermal system insulation or surfacing material, or where the employer does not produce a "negative exposure assessment" or where monitoring results show a PEL has been exceeded, shall wear respirators which are selected, used and fitted pursuant to provisions of subsection (h) of this section.

(10) Class IV asbestos work. Class IV asbestos jobs shall be conducted by employees trained pursuant to the asbestos awareness training program set out in subsection (k)(9) of this section. In addition, all Class IV jobs shall be conducted in conformity with the requirements set out in subsection (g)(1) of this section, mandating wet methods, HEPA vacuums, and prompt clean up of debris containing ACM or PACM.

(A) Employees cleaning up debris and waste in a regulated area where respirators are required shall wear respirators which are selected, used and fitted pursuant to provisions of subsection (h) of this section.

(B) Employers of employees who clean up waste and debris in, and employers in control of, areas where friable thermal system insulation or surfacing material is accessible, shall assume that such waste and debris contain asbestos.

(11) Alternative methods of compliance for installation, removal, repair, and maintenance of certain roofing and pipeline coating materials. Notwithstanding any other provision of this section, an employer who complies with all provisions of this subsection (g)(11) when installing, removing, repairing, or maintaining intact pipeline asphaltic wrap, or roof cements, mastics, coatings, or flashings which contain asbestos fibers encapsulated or coated by bituminous or resinous compounds shall be deemed to be in compliance with this section. If an employer does not comply with all provisions of this subsection (g)(11), or if during the course of the job the material does not remain intact, the provisions of subsection (g)(8) of this section apply instead of this subsection (g)(11).

(A) Before work begins and as needed during the job, a competent person who is capable of identifying asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective measures to eliminate such hazards, shall conduct an inspection of the worksite and determine that the roofing material is intact and will likely remain intact.

(B) All employees performing work covered by this subsection (g)(11) shall be trained in a training program

that meets the requirements of subsection (k)(9)(H).

(C) The material shall not be sanded, abraded, or ground. Manual methods which do not render the material non-intact shall be used.

(D) Material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane or hoist. All such material shall be removed from the roof as soon as is practicable, but in any event no later than the end of the work shift.

(E) Where roofing products which have been labeled as containing asbestos pursuant to subsection (k)(8) of this section are installed on non-residential roofs during operations covered by this subsection (g)(11), the employer shall notify the building owner of the presence and location of such materials no later than the end of the job.

(F) All removal or disturbance of pipeline asphaltic wrap shall be performed using wet methods.

(h) Respiratory protection.

(1) General. For employees who use respirators required by this section, the employer must provide respirators that comply with the requirements of this subsection. Respirators must be used during:

(A) Class I asbestos work.

(B) Class II asbestos work where the ACM is not removed in a substantially intact state,

(C) Class II and III asbestos work which is not performed using wet methods, except for removal of ACM from sloped roofs when a negative exposure assessment has been made and the ACM is removed in an intact state.

(D) Class II and III asbestos work for which a "negative exposure assessment" has not been conducted.

(E) Class III asbestos work when TSI or surfacing ACM or PACM is being disturbed.

(F) Class IV asbestos work performed within regulated areas where employees performing other work are required to use respirators.

(G) Work operations covered by this section where employees are exposed above the TWA or excursion limit.

(H) Emergencies.

(2) Respirator program.

(A) The employer must implement a respiratory protection program in accordance with section 5144(b) through (d) (except (d)(1)(C)), and (f) through (m).

(B) No employee shall be assigned to asbestos work that requires respirator use if, based on their most recent medical examination, the examining physician determines that the employee will be unable to function normally while using a respirator, or that the safety or health of the employee or other employees will be impaired by the employee's respirator use. Such employees must be assigned to another job or given the opportunity to transfer to a different position that they can perform. If such a transfer position is available, it must be with the same employer, in the same geographic area, and with the same seniority, status, rate of pay, and other job benefits the employee had just prior to such transfer.

(3) Respirator selection.

(A) The employer shall select, and provide to employees, the appropriate respirators as specified in Section 5144(d)(3)(A)1; however, employers shall not select or use filtering facepiece respirators for use against , asbestos fibers.

(B) The employer shall provide HEPA filters for powered and non-powered air-purifying respirators.

(C) The employer shall provide a tight fitting powered, air- purifying respirator in lieu of any negative-pressure respirator selected according to subsection (h)(3)(A) whenever:

1. An employee chooses to use this type of respirator; and
2. This respirator will provide adequate protection to the employee.

(D) The employer shall provide a half-mask air purifying respirator, other than a filtering facepiece respirator, equipped with high efficiency filters whenever the employee performs:

1. Class II and III asbestos work and a negative exposure assessment has not been conducted by the employer;
2. Class III jobs where TSI or surfacing ACM or PACM is being disturbed.

(E) In addition to the above selection criteria, when employees are in a regulated area where Class I work is being performed, a negative exposure assessment of the area has not been produced, and the exposure assessment of the area indicates the exposure level will exceed 1 f/cc as an 8-hour time weighted average, employers must provide the employees with a full facepiece supplied-air respirator operated in the pressure-demand mode and equipped with an auxiliary positive pressure self-contained breathing apparatus. When the exposure assessment of the area indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average, employers must provide the employees with one of the following respirators:

1. A tight-fitting powered air-purifying respirator equipped with high efficiency filters;
2. A full facepiece supplied air-respirator operated in the pressure-demand mode equipped with HEPA egress cartridges or an auxiliary positive-pressure, self-contained breathing apparatus (SCBA); or

3. A full facepiece supplied-air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

(i) Protective clothing.

(1) General. The employer shall provide or require the use of protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos that exceed the TWA and/or excursion limit prescribed in subsection (c) of this section, or for which a required negative exposure assessment is not produced, and for any employee performing Class I operations which involve the removal of over 25 linear or 10 square feet of TSI or surfacing ACM and PACM. The employer shall prohibit the removal of asbestos from protective clothing and equipment by blowing, shaking, or brushing.

(2) Laundering.

(A) The employer shall ensure that laundering of contaminated clothing is done so as to prevent the release of airborne asbestos in excess of the TWA or excursion limit prescribed in subsection (c) of this section.

(B) Any employer who gives contaminated clothing to another person for laundering shall inform such person of the requirement in subsection (i)(2)(A) of this section to effectively prevent the release of airborne asbestos in excess of the TWA and excursion limit prescribed in subsection (c) of this section.

(3) Contaminated clothing. Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and be labeled in accordance with subsection (k) of this section.

(4) Inspection of protective clothing.

(A) The competent person shall examine worksuits worn by employees at least once per workshift for rips or tears that may occur during performance of work.

(B) When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the worksuit shall be immediately replaced.

(j) Hygiene facilities and practices for employees.

(1) Requirements for employees performing Class I asbestos jobs involving over 25 linear or 10 square feet of TSI or surfacing ACM and PACM.

(A) Decontamination areas: the employer shall establish a decontamination area that is adjacent and connected to the regulated area for the decontamination of such employees. The decontamination area shall consist of an equipment room, shower area, and clean room in series. The employer shall ensure that employees enter and exit the regulated area through the decontamination area.

1. Equipment room. The equipment room shall be supplied with impermeable, labeled bags and containers for the containment and disposal of contaminated protective equipment.

2. Shower area. Shower facilities shall be provided which comply with Section 3366(f) of the

General Industry Safety Orders, unless the employer can demonstrate that they are not feasible. The showers shall be adjacent both to the equipment room and the clean room, unless the employer can demonstrate that this location is not feasible. Where the employer can demonstrate that it is not feasible to locate the shower between the equipment room and the clean room, or where the work is performed outdoors, the employers shall ensure that employees:

A. Remove asbestos contamination from their worksuits in the equipment room using a HEPA vacuum before proceeding to a shower that is not adjacent to the work area; or

B. Remove their contaminated worksuits in the equipment room, then don clean worksuits, and proceed to a shower that is not adjacent to the work area.

3. Clean change room. The clean room shall be equipped with a locker or appropriate storage container for each employee's use. When the employer can demonstrate that it is not feasible to provide a clean change area adjacent to the work area or where the work is performed outdoors, the employer may permit employees engaged in Class I asbestos jobs to clean their protective clothing with a portable HEPA-equipped vacuum before such employees leave the regulated area. Following showering, such employees however must then change into street clothing in clean change areas provided by the employer which otherwise meet the requirements of this section.

(B) Decontamination area entry procedures. The employer shall ensure that employees:

1. Enter the decontamination area through the clean room;
2. Remove and deposit street clothing within a locker provided for their use; and
3. Put on protective clothing and respiratory protection before leaving the clean room.
4. Before entering the regulated area, the employer shall ensure that employees pass through the equipment room.

(C) Decontamination area exit procedures. The employer shall ensure that:

1. Before leaving the regulated area, employees shall remove all gross contamination and debris from their protective clothing.
2. Employees shall remove their protective clothing in the equipment room and deposit the clothing in labeled impermeable bags or containers.
3. Employees shall not remove their respirators in the equipment room.
4. Employees shall shower prior to entering the clean room.
5. After showering, employees shall enter the clean room before changing into street clothes.

(D) Lunch Areas. Whenever food or beverages are consumed at the worksite where employees are performing Class I asbestos work, the employer shall provide lunch areas in which the airborne concentrations of asbestos are below the permissible exposure limit and/or excursion limit.

(2) Requirements for Class I work involving less than 25 linear or 10 square feet of TSI or surfacing ACM and PACM, and for Class II and Class III asbestos work operations where exposures exceed a PEL or where there is no negative exposure assessment produced before the operation.

(A) The employer shall establish an equipment room or area that is adjacent to the regulated area for the decontamination of employees and their equipment which is contaminated with asbestos which shall consist of an area covered by a impermeable drop cloth on the floor or horizontal working surface.

(B) The area must be of sufficient size as to accommodate cleaning of equipment and removing personal protective equipment without spreading contamination beyond the area (as determined by visible accumulations).

(C) Work clothing must be cleared with a HEPA vacuum before it is removed.

(D) All equipment and surfaces of containers filled with ACM must be cleaned prior to removing them from the equipment room or area.

(E) The employer shall ensure that employees enter and exit the regulated area through the equipment room or area.

(3) Requirements for Class IV work. Employers shall ensure that employees performing Class IV work within a regulated area comply with the hygiene practice required of employees performing work which has a higher classification within that regulated area. Otherwise employers of employees cleaning up debris and material which is TSI or surfacing ACM or identified as PACM shall provide decontamination facilities for such employees which are required by subsection (j)(2) of this section.

(4) Smoking in work areas. The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that work area.

(k) Communication of hazards.

(1) Hazard communication.

(A) This section applies to the communication of information concerning asbestos hazards in construction activities to facilitate compliance with this standard. Most asbestos-related construction activities involve previously installed building materials. Building owners often are the only and/or best sources of information concerning them. Therefore, they, along with employers of potentially exposed employees, are assigned specific information conveying and retention duties under this section. Installed Asbestos Containing Building Material. Employers and building owners shall identify TSI and sprayed or troweled on surfacing materials in buildings as asbestos-containing, unless they determine in compliance with subsection (k)(5) of this section that the material is not asbestos-containing. Asphalt and vinyl flooring material installed no later than 1980 must also be considered as asbestos containing unless the employer, pursuant to subsection (g)

(8)(A)9. of this section determines that it is not asbestos-containing. If the employer/building owner has actual knowledge, or should have known through the exercise of due diligence, that other materials are asbestos-containing, they too must be treated as such. When communicating information to employees pursuant to this standard, owners and employers shall identify "PACM" as ACM. Additional requirements relating to communication of asbestos work on multi-employer worksites are set out in subsection (d) of this section.

(B) The employer shall include asbestos in the program established to comply with the Hazard Communication Standard (HCS) (Section 5194). The employer shall ensure that each employee has access to labels on containers of asbestos and safety data sheets, and is trained in accordance with the provisions of HCS and subsections (k)(9) and (10) of this section. The employer shall provide information on at least the following hazards: Cancer and lung effects.

(2) Duties of building and facility owners.

(A) Before work subject to this standard is begun, building and facility owners shall determine the presence, location, and quantity of ACM and/or PACM at the work site pursuant to subsection (k)(1) of this section.

(B) Building and/or facility owners shall notify the following persons of the presence, location and quantity of ACM or PACM, at the work sites in their buildings and facilities. Notification either shall be in writing, or shall consist of a personal communication between the owner and the person to whom notification must be given or their authorized representatives:

1. Prospective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing such material;
2. Employees of the owner who will work in or adjacent to areas containing such material;
3. On multi-employer worksites, all employers of employees who will be performing work within or adjacent to areas containing such materials;
4. Tenants who will occupy areas containing such material

(3) Duties of employers whose employees perform work subject to this standard in or adjacent to areas containing ACM and PACM. Building/facility owners whose employees perform such work shall comply with these provisions to the extent applicable.

(A) Before work in areas containing ACM and PACM is begun; employers shall identify the presence, location, and quantity of ACM, and/or PACM therein pursuant to subsection (k)(1) of this section.

(B) Before work under this standard is performed employers of employees who will perform such work shall inform the following persons of the location and quantity of ACM and/or PACM present in the area and the precautions to be taken to insure that airborne asbestos is confined to the area.

1. Owners of the building/facility;

2. Employees who will perform such work and employers of employees who work and/or will be working in adjacent areas.

(C) Within 10 days of the completion of such work, the employer whose employees have performed work subject to this standard, shall inform the building/facility owner and employers of employees who will be working in the area of the current location and quantity of PACM and/or ACM remaining in the area and final monitoring results, if any.

(4) In addition to the above requirements, all employers who discover ACM and/or PACM on a worksite shall convey information concerning the presence, location and quantity of such newly discovered ACM and/or PACM to the owner and to other employers of employees working at the work site, within 24 hours of the discovery.

(5) Criteria to rebut the designation of installed material as PACM.

(A) At any time, an employer and/or building owner may demonstrate, for purposes of this standard, that PACM does not contain asbestos. Building owners and/or employers are not required to communicate information about the presence of building material for which such a demonstration pursuant to the requirements of subsection (k)(5)(B) of this section has been made. However, in all such cases, the information, data and analysis supporting the determination that PACM does not contain asbestos, shall be retained pursuant to subsection (n) of this section.

(B) An employer or owner may demonstrate that PACM does not contain more than 1% asbestos by the following:

1. Having completed an inspection conducted pursuant to the requirements of AHERA (40 CFR Part 763, Subpart E) which demonstrates that the material is not ACM or;

2. Performing tests of the material containing PACM which demonstrate that no ACM is present in the material. Such tests shall include analysis of bulk samples collected in the manner described in 40 CFR 763.86. The tests, evaluation and sample collection shall be conducted by an accredited inspector or by a CIH. Analysis of samples shall be performed by persons or laboratories with proficiency demonstrated by current successful participation in a nationally recognized testing program such as the National Voluntary Laboratory Accreditation Program (NVLAP) or the National Institute for Standards and Technology (NIST) or the Round Robin for bulk samples administered by the American Industrial Hygiene Association (AIHA) or an equivalent nationally-recognized round robin testing program.

(C) The employer and/or building owner may demonstrate that flooring material including associated mastic and backing does not contain asbestos, by a determination of an industrial hygienist based upon recognized analytical techniques showing that the material is not ACM.

(6) At the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain thermal system insulation and surfacing ACM and/or PACM, the building owner shall post signs which identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that ACM and/or PACM will not be disturbed. The employer shall ensure, to the

extent feasible, that employees who come in contact with these signs can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

(7) Signs.

(A) Warning signs that demarcate the regulated area shall be provided and displayed at each location where a regulated area is required to be established by subsection (e) of this section. Signs shall be posted at such a distance from such a location that an employee may read the signs and take necessary protective steps before entering the area marked by the signs.

(B) 1. The warning signs required by subsection (k)(7) of this section shall bear the following information:

DANGER

ASBESTOS

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

AUTHORIZED PERSONNEL ONLY

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

WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

3. Prior to June 1, 2016, employers may use the following legend in lieu of that specified in subsection (k)(7)(B)1. of this section:

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD

AUTHORIZED PERSONNEL ONLY

4. Prior to June 1, 2016, employers may use the following legend in lieu of that specified in subsection (k)(7)(B)2. of this section:

RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

(C) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by subsection (k)(7)(A) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

(8) Labels.

(A) Labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Where feasible, installed asbestos products shall contain a visible label.

(B) The employer shall ensure that such labels comply with subsection (k) of this section.

(C) The employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers bear the following information:

DANGER

CONTAINS ASBESTOS FIBERS

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

DO NOT BREATHE DUST

AVOID CREATING DUST

(D)1. Prior to June 1, 2015, employers may include the following information on raw materials, mixtures or labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers in lieu of the labeling requirements in subsections (k)(8)(B) and (k)(8)(C) of this section:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

2. Labels shall contain a warning statement against breathing asbestos fibers.

(E) The provisions for labels required by subsections (k)(8)(A) through (k)(8)(C) do not apply where:

1. Asbestos fibers have been modified by a bonding agent, coating, binder, or other material, provided that the manufacturer can demonstrate that, during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the permissible exposure limit and/or excursion limit will be released, or

2. Asbestos is present in a waste product in concentrations less than 1.0 percent.

NOTE: Section 5194 of the General Industry Safety Orders requires that manufactured and imported products containing more than 0.1% asbestos by weight be labeled with an appropriate warning. The exemptions specified

in subsection (k)(7)(E) only apply to waste products or waste containers.

(F) When a building owner/or employer identifies previously installed PACM and/or ACM, labels or signs shall be affixed or posted so that employees will be notified of what materials contain PACM and/or ACM. The employer shall attach such labels in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical room/areas. Signs required by subsection (k)(6) of this section may be posted in lieu of labels so long as they contain information required for labelling. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs or labels can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

(9) Employee Information and Training.

(A) The employer shall, at no cost to the employee, institute a training program for all employees who are likely to be exposed in excess of a PEL and for all employees who perform Class I through IV asbestos operations, and shall ensure their participation in the program.

(B) Training shall be provided prior to or at the time of initial assignment and at least annually thereafter. Employees engaged in asbestos-related work that requires employer registration under Section 341.6 or engaged in asbestos cement pipe operations as defined in subsection (r), shall be trained and certified by a Division approved training provider. To be approved by the Division, training providers shall (1) apply to the Division for course approval and (2) pay fees covering the cost of the approval process to the Division as specified in regulations promulgated by the Division pursuant to the provisions of Chapter 3.5 (beginning with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

(C) Training for Class I operations and for Class II operations that require the use of critical barriers (or equivalent isolation methods) and/or negative pressure enclosures under this section shall be the equivalent in curriculum training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement workers training (40 CFR Part 763, Subpart E, Appendix C).

(D) Training for other Class II work.

1. For work with asbestos containing material involving roofing materials, flooring materials, siding materials, ceiling tiles, or transite panels, training shall include at a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to that category. Such course shall include "hands-on" training and shall take at least 8 hours.
2. An employee who works with more than one of the categories of material specified in subsection (k)(9)(D)1. of this section shall receive training in the work practices applicable to each category of material that the employee removes and each removal method that the employee uses.
3. For Class II operations not involving the categories of material specified in subsection (k)(9)(D)1. of this section, training shall be provided which shall include at a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to the category of material being removed, and shall include "hands-on"

training in the work practices applicable to each category of material that the employee removes and each removal method that the employee uses.

(E) Training for Class III employees shall be consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2). Such a course shall also include 'hands-on' training and shall take at least 16 hours.

EXCEPTION: For Class III operations for which the competent person determines that the EPA curriculum does not adequately cover the training needed to perform that activity, training shall include as a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to that activity, and shall include "hands-on" training in the work practices applicable to each category of material that the employee disturbs.

(F) Training for employees performing Class IV operations shall be consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(1). Such a course shall include available information concerning the locations of thermal system insulation and surfacing ACM/PACM, and asbestos-containing flooring material, or flooring material where the absence of asbestos has not yet been certified; and instruction in recognition of damage, deterioration, and delamination of asbestos containing building materials. Such course shall take at least 2 hours.

(G) Training for employees who are likely to be exposed in excess of the PEL and who are not otherwise required to be trained under subsections (k)(9)(C) through (F) of this section, shall meet the requirements of subsection (k)(9)(H) of this section.

(H) The training program shall be conducted in a manner that the employee is able to understand. In addition to the content required by provisions in subsections (k)(9)(C) through (F) of this section, the employer shall ensure that each such employee is informed of the following:

1. Methods of recognizing asbestos, including the requirement in subsection (k)(1) of this section to presume that certain building materials contain asbestos;
2. The health effects associated with asbestos exposure;
3. The relationship between smoking and asbestos in producing lung cancer;
4. The nature of operations that could result in exposure to asbestos, the importance of necessary protective controls to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, and waste disposal procedures, and any necessary instruction in the use of these controls and procedures where Class III and IV work will be or is performed, the contents of EPA 20T-2003, "Managing Asbestos In-Place" July 1990 or its equivalent in content;
5. The purpose, proper use, fitting instructions, and limitations of respirators as required by Section 5144;
6. The appropriate work practices for performing the asbestos job;

7. Medical surveillance program requirements;
8. The content of this standard including appendices;
9. The names, addresses and phone numbers of public health organizations which provide information, materials and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in Appendix J to this section, to comply with this requirement; and
10. The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

(10) Access to training materials.

(A) The employer shall make readily available to affected employees without cost, written materials relating to the employee training program, including a copy of this regulation.

(B) The employer shall provide to the Chief and the Director, upon request, all information and training materials relating to the employee information and training program.

(C) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NHH Publication No. 89-1647, or equivalent self-help material, which is approved or published by a public health organization listed in Appendix J to this section.

(l) Housekeeping.

(1) Vacuuming. Where vacuuming methods are selected, HEPA filtered vacuuming equipment must be used. The equipment shall be used and emptied in a manner that minimizes the reentry of asbestos into the workplace.

(2) Waste disposal. Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing consigned for disposal shall be collected and disposed of in sealed, labeled, impermeable bags or other closed, labeled, impermeable containers except in roofing operations, where the procedures specified in subsection (g)(8)(B) of this section apply.

(3) Care of asbestos-containing flooring material.

(A) All vinyl and asphalt flooring material shall be maintained in accordance with this subsection unless the building/facility owner demonstrates, pursuant to subsection (g)(8)(A)9. of this section that the flooring does not contain asbestos.

(B) Sanding of flooring material is prohibited.

(C) Stripping of finishes shall be conducted using low abrasion pads at speeds lower than 300 rpm and wet methods.

(D) Burnishing or dry buffing may be performed only on flooring which has sufficient finish so that the pad cannot contact the flooring material.

(4) Waste and debris and accompanying dust in an area containing accessible thermal system insulation or surfacing ACM/PACM or visibly deteriorated ACM:

(A) shall not be dusted or swept dry, or vacuumed without using a HEPA filter;

(B) shall be promptly cleaned up and disposed of in leak tight containers.

(m) Medical surveillance.

(1) General

(A) Employees covered.

1. The employer shall institute a medical surveillance program for all employees who, for a combined total of 30 or more days per year, are engaged in Class I, II and III work or are exposed at or above the permissible exposure limit. For purposes of this paragraph, any day in which a worker engages in Class II or Class III operations or a combination thereof on intact material for one hour or less (taking into account the entire time spent on the removal operation, including cleanup) and, while doing so, adheres fully to the work practices specified in this standard, shall not be counted.

2. For employees otherwise required by this standard to wear a negative pressure respirator, employers shall ensure employees are physically able to perform the work and use the equipment. This determination shall be made under the supervision of a physician.

(B) Examination.

1. The employer shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided at no cost to the employee and at a reasonable time and place.

2. Persons other than such licensed physicians who administer the pulmonary function testing required by this section shall complete a training course in spirometry sponsored by an appropriate academic or professional institution.

(2) Medical examinations and consultations.

(A) Frequency. The employer shall make available medical examinations and consultations to each employee covered under subsection (m)(1)(A) of this section on the following schedules:

1. Prior to assignment of the employee to an area where negative- pressure respirators are worn;

2. When the employee is assigned to an area where exposure to asbestos may be at or above the permissible exposure limit for 30 or more days per year, or engage in Class I, II or III work for a combined total of 30 or more days per year, a medical examination must be given within 10 working days following the thirtieth day of

exposure;

3. And at least annually thereafter.

4. If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees at the frequencies specified by the physician.

5. Exception: No medical examination is required of any employee if adequate records show that the employee has been examined in accordance with this subsection within the past 1 year period.

6. Employers shall provide a medical examination at the termination of employment for any employee who has been exposed to airborne concentrations of asbestos at or above the permissible exposure limit and/or excursion limit. The medical examination shall be given within 30 calendar days before or after the date of termination of employment.

(B) Content. Medical examinations made available pursuant to subsections (m)(2)(A)1. through (m)(2)(A)3. of this section shall include:

1. A medical and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems.

2. On initial examination, the standardized questionnaire contained in Part 1 of Appendix D to this section, and, on annual examination, the abbreviated standardized questionnaire contained in Part 2 of Appendix D to this section.

3. A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered in accordance with Table 2 below, and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV(1)). Interpretation and classification of chest roentgenograms shall be conducted in accordance with Appendix E to this section.

TABLE 2

FREQUENCY OF CHEST X-RAYS

YEARS SINCE FIRST EXPOSURE	AGE OF EMPLOYEE	
	LESS THAN 40	40 AND OLDER
0-10	EVERY 3 YEARS	ANNUALLY*
10+	ANNUALLY*	ANNUALLY*

*Oblique x-rays need only be performed every 3 years.

4. Any other examinations or tests deemed necessary by the examining physician.

(3) Information provided to the physician. The employer shall provide the following information to the examining physician:

- (A) A copy of this standard and Appendices D, E, and I to this section;
- (B) A description of the affected employee's duties as they relate to the employee's exposure;
- (C) The employee's representative exposure level or anticipated exposure level;
- (D) A description of any personal protective and respiratory equipment used or to be used; and
- (E) Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

(4) Physician's written opinion.

(A) The employer shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination and shall include:

1. The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos;
2. Any recommended limitations on the employee or on the use of personal protective equipment such as respirators; and
3. A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.
4. A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

(B) The employer shall instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.

(C) The employer shall provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

(n) Recordkeeping.

(1) Objective data relied on pursuant to subsection (f) to this section.

(A) Where the employer has relied on objective data that demonstrates that products made from or containing asbestos or the activity involving such products or material are not capable of releasing fibers of asbestos in concentrations at or above the permissible exposure limit and/or excursion limit under the expected conditions of processing, use, or handling to satisfy the requirements of subsection (f), the employer shall establish and maintain an accurate record of objective data reasonably relied upon in

support of the exemption.

(B) The record shall include at least the following information:

1. The product qualifying for exemption;
2. The source of the objective data;
3. The testing protocol, results of testing, and/or analysis of the material for the release of asbestos;
4. A description of the operation exempted and how the data support the exemption; and
5. Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(C) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) Exposure measurements.

(A) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed in subsection (f) of this section. Note: The employer may utilize the services of competent organizations such as industry trade associations and employee associations to maintain the records required by this section.

(B) This record shall include at least the following information:

1. The date of measurement;
2. The operation involving exposure to asbestos that is being monitored;
3. Sampling and analytical methods used and evidence of their accuracy;
4. Number, duration, and results of samples taken;
5. Type of protective devices worn, if any; and
6. Name, social security number, and exposure of the employees whose exposures are represented.

(C) The employer shall maintain this record for at least thirty (30) years, in accordance with Section 3204 of the General Industry Safety Orders.

(3) Medical surveillance.

(A) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by subsection (m) of this section, in accordance with Section 3204 of the General Industry

Safety Orders.

(B) The record shall include at least the following information:

1. The name and social security number of the employee;
2. A copy of the employee's medical examination results, including the medical history, questionnaire responses, results of any tests, and physician's recommendations.
3. Physician's written opinions;
4. Any employee medical complaints related to exposure to asbestos; and
5. A copy of the information provided to the physician as required by subsection (m) of this section.

(C) The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with Section 3204 of the General Industry Safety Orders.

(4) Training records. The employer shall maintain all employee training records for one (1) year beyond the last date of employment by that employer.

(5) Data to Rebut PACM. Where the building owner and employer have relied on data to demonstrate that PACM is not asbestos-containing, such data shall be maintained for as long as they are relied upon to rebut the presumption.

(6) Records of Required Notifications. Where the building owner has communicated and received information concerning the identification, location and quantity of ACM and PACM, written records of such notifications and their content shall be maintained by the building owner for the duration of ownership and shall be transferred to successive owners of such buildings/facilities.

(7) Availability.

(A) The employer, upon written request, shall make all records required to be maintained by this section available to the Chief and the Director for examination and copying.

(B) The employer, upon request, shall make any exposure records required by subsections (f) and (n) of this section available for examination and copying to affected employees, former employees, designated representatives, and the Chief, in accordance with Section 3204 of the General Industry Safety Orders.

(C) The employer, upon request, shall make employee medical records required by subsections (m) and (n) of this section available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Chief, in accordance with Section 3204 of the General Industry Safety Orders.

(8) Transfer of records.

(A) The employer shall comply with the requirements concerning transfer of records set forth in Section 3204 of the General Industry Safety orders.

(B) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director at least 90 days prior to disposal and, upon request, transmit them to the Director.

(o) Competent person.

(1) General. On all construction worksites covered by this standard, the employer shall designate a competent person, having the qualifications and authorities for ensuring worker safety and health required by Sections 1509, 1510, 1512, 1513, 1514, 1523, and 1920 of these orders.

(2) Required Inspections by the Competent Person. Section 1509(a) of these orders, which requires health and safety prevention programs to provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons, is incorporated.

(3) Additional Inspections. In addition, the competent person shall make frequent and regular inspections of the job sites, in order to perform the duties set out below in subsection (o)(3)(A). For Class I jobs, on-site inspections shall be made at least once during each work shift, and at any time at employee request. For Class II, III and IV jobs, on-site inspections shall be made at intervals sufficient to assess whether conditions have changed, and at any reasonable time at employee request.

(A) On all worksites where employees are engaged in Class I or II asbestos work, the competent person designated in accordance with subsection (e)(6) of this section shall perform or supervise the following duties, as applicable:

1. Set up the regulated area, enclosure, or other containment;
2. Ensure (by on-site inspection) the integrity of the enclosure or containment;
3. Set up procedures to control entry to and exit from the enclosure and/or area;
4. Supervise all employee exposure monitoring required by this section and ensure that it is conducted as required by subsection (f) of this section;
5. Ensure that employees working within the enclosure and/or using glove bags wear respirators and protective clothing as required by subsections (h) and (i) of this section;
6. Ensure through on-site supervision, that employees set up, use, and remove engineering controls, use work practices and personal protective equipment in compliance with all requirements;
7. Ensure that employees use the hygiene facilities and observe the decontamination procedures specified in subsection (j) of this section;

8. Ensure that, through on-site inspection, engineering controls are functioning properly and employees are using proper work practices; and,

9. Ensure that notification requirement in subsection (k) of this section are met.

(4) Training for the competent person.

(A) For Class I, and II asbestos work the competent person shall be trained in all aspects of asbestos removal and handling, including: abatement, installation, removal and handling; the contents of this standard; the identification of asbestos; removal procedures, where appropriate; and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course for supervisors, that meets the criteria of EPA's Model Accredited Plan (40 CFR Part 763, Subpart E, Appendix C), such as a course conducted by an EPA-approved or state approved training provider, certified by EPA or a state, or a course equivalent in stringency, content and length.

(B) For Class III and IV asbestos work, the competent person shall be trained in aspects of asbestos handling appropriate for the nature of the work, to include procedures for setting up glove bags and mini-enclosures, practices for reducing asbestos exposures, use of wet methods, the contents of this standard, and the identification of asbestos. Such training shall include successful completion of a course that is consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2), or its equivalent in stringency, content, and length. Competent persons for Class III and IV work, may also be trained pursuant to the requirements of subsection (o)(4)(A) of this section.

(p) Appendices.

(1) Appendices A, C, D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

(2) Appendices B, F, H, I, J, and K to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

(q) Certified Asbestos Consultants and Certified Site Surveillance Technicians.

(1) The following definitions are applicable to subsection (q) only:

"Asbestos consultant" means any person who contracts to provide professional health and safety services relating to asbestos-containing construction material as defined in this subsection, which comprises 100 square feet or more of surface area. The activities of an asbestos consultant include building inspection, abatement project design, contract administration, sample collection, preparation of asbestos management plans, clearance monitoring, and supervision of site surveillance technicians as defined in this subsection.

"Asbestos-containing construction material" means any manufactured construction material which contains more than one tenth of 1 percent asbestos by weight.

"Certified asbestos consultant" means any asbestos consultant certified by the Division pursuant to this section.

“Certified site surveillance technician” means any surveillance technician certified by the Division pursuant to the section.

“Division” means the Division of Occupational Safety and Health of the California Department of Industrial Relations.

“Site surveillance technician” means any person who acts as an independent on-site representative of an asbestos consultant. The site surveillance technician monitors the asbestos abatement activities of others, provides asbestos air monitoring services for area and personal samples, and performs building surveys and contract administration at the direction of an asbestos consultant.

“State-of-the-art” means all asbestos abatement and control work procedures currently in use which have been demonstrated to be the most effective, reliable, and protective of workers health. As new procedures are developed which demonstrate greater effectiveness, reliability, and worker protection and thereby come into use, they become state-of-the-art.

(2) Certified Asbestos Consultant Criteria.

To obtain certification, an asbestos consultant must apply to the Division and complete all application requirements specified in Section 341.15. In order to qualify as an asbestos consultant, the applicant must meet all of the following requirements:

(A) Achievement of a passing score as determined by the Division on an examination approved or administered by the Division including, but not limited to, the following subjects:

1. The physical characteristics of asbestos;
2. The health effects of asbestos;
3. The regulatory requirements of the Division, the Federal Occupational Safety and Health Administration, the U.S. Environmental Protection Agency, air quality management districts, and the Department of Health Services, including protective clothing, respiratory protection, exposure limits, personal hygiene, medical monitoring, disposal, and general industry safety hazards;
4. State-of-the-art asbestos abatement and control work procedures;
5. Federal Asbestos Hazard Emergency Response Act training information and procedures for inspectors, management planners, and supervisors, as provided for under Subchapter II (commencing with Section 2641) of Chapter 53 of Title 15 of the United States Code, or the equivalent, as determined by the Division; and
6. Information concerning industrial hygiene sampling methodology, including asbestos sampling and analysis techniques and recordkeeping.

(B) Providing such documentation and other information as the Division shall require to substantiate:

1. The possession of a valid and appropriate federal Asbestos Hazard Emergency Response Act [Subchapter II (commencing with Section 2641) of Chapter 53 of Title 15 of the United States Code] certificate, or its

equivalent, as determined by the Division; and

2. Any one of the following combinations of education and experience:

A. One year of asbestos-related experience and a bachelor of science degree in engineering, architecture, industrial hygiene, construction management, or a related biological or physical science;

B. Two years of asbestos-related experience and a bachelor's degree;

C. Three years of asbestos-related experience and an associate of arts degree in engineering, architecture, industrial hygiene, construction management, or a related biological or physical science; or

D. Four years of asbestos-related experience and a high school diploma or its equivalent.

(3) Certified Site Surveillance Technician Criteria.

To obtain certification, a site surveillance technician must apply to the Division and complete all application requirements specified in Section 341.15. In order to qualify as a site surveillance technician, the applicant must meet all of the following requirements:

(A) Achievement of a passing score as determined by the Division on an examination approved or administered by the Division including, but not limited to, the following subjects:

1. The physical characteristics of asbestos;

2. The health effects of asbestos;

3. The regulatory requirements of the Division, the Federal Occupational Safety and Health Administration, the U.S. Environmental Protection Agency, air quality management districts, and the Department of Health Services, including protective clothing, respiratory protection, exposure limits, personal hygiene, medical monitoring, disposal, and general industry safety hazards;

4. State-of-the-art asbestos abatement and control work procedures.

5. Information concerning industrial hygiene sampling methodology, including sampling techniques and recordkeeping.

(B) Providing such documentation and other information as the Division shall require to substantiate all of the following:

1. Possession of a valid federal Asbestos Hazard Emergency Response Act [Subchapter II (commencing with Section 2641) of Chapter 53 of Title 15 of the United States Code] certificate for the type of work being performed, or its equivalent, as determined by the Division.

2. Six (6) months of asbestos-related experience under the supervision of an asbestos consultant.

3. Possession of a high school diploma or equivalent.

(4) No employer shall engage the services of an asbestos consultant or site surveillance technician unless that person provides proof of certification by the Division.

(r) Report of Use and Asbestos-related Work Registration.

(1) The following definitions are applicable to subsection (r) only:

“Asbestos-containing construction material” means any manufactured construction material which contains more than one tenth of 1 percent asbestos by weight.

“Asbestos-related work” means any activity which by disturbing asbestos-containing construction materials may release asbestos fibers into the air and which is not related to its manufacture, the mining or excavation of asbestos-bearing ore or materials, or the installation or repair of automotive materials containing asbestos. Asbestos-related work does not include the installation, repair, maintenance, or nondestructive removal of asbestos cement pipe used outside of buildings if the work operations do not result in employee exposures to asbestos in excess of 0.1 fibers per cubic centimeter of air (f/cc) as an 8-hour time-weighted average and the employees and supervisors involved in the work operations are trained and certified by an asbestos cement pipe training program which is approved by the Division.

(2) Report of Use. See section 5203. Note: Employers registered with the Chief in accordance with Sections 341.6 to 341.9 for the purpose of conducting asbestos-related work involving over 100 square feet, as defined in Section 341.6(a), of asbestos-containing construction material shall be deemed to be in compliance with section 5203 for the asbestos-related work requiring registration. Except that emergencies as defined in section 5203(a) must be reported as required in section 5203(f).

EXCEPTION: An employer need not register all the materials containing asbestos if objective data demonstrates that during all reasonably foreseeable uses, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the permissible exposure limit and/or excursion limit will be released. The objective data shall include at least those elements specified in subsection (n)(1) of this section.

Note: Authority cited: Sections 142.3, 6501.5, 9020, 9021.5, 9021.9, 9030 and 9040, Labor Code.

Reference: Sections 142.3, 6501.5, 6501.7, 6501.8, 6501.9, 6502, 9003, 9004(b), 9005, 9006, 9009, 9020, 9021.5, 9021.9, 9030 and 9040, Labor Code; Section 25910, Health and Safety Code; and Sections 7180, 7180.5, 7181, 7182, 7183, 7183.5, 7184, 7185, 7187, 7189, 7189.5 and 7189.7, Business and Professions Code.

HISTORY

1. New section filed 2-15-91; operative 2-15-91 pursuant to Government Code section 11346.2(d) (Register 91, No. 19).

2. Editorial correction of HISTORY 1. (Register 91, No. 45).

3. Amendment of subsection (b) and NOTE and adoption of subsections (o)(6)-(o)(8) and (t) filed 1-21-92 as an emergency; operative 2-20-92 (Register 92, No. 13).

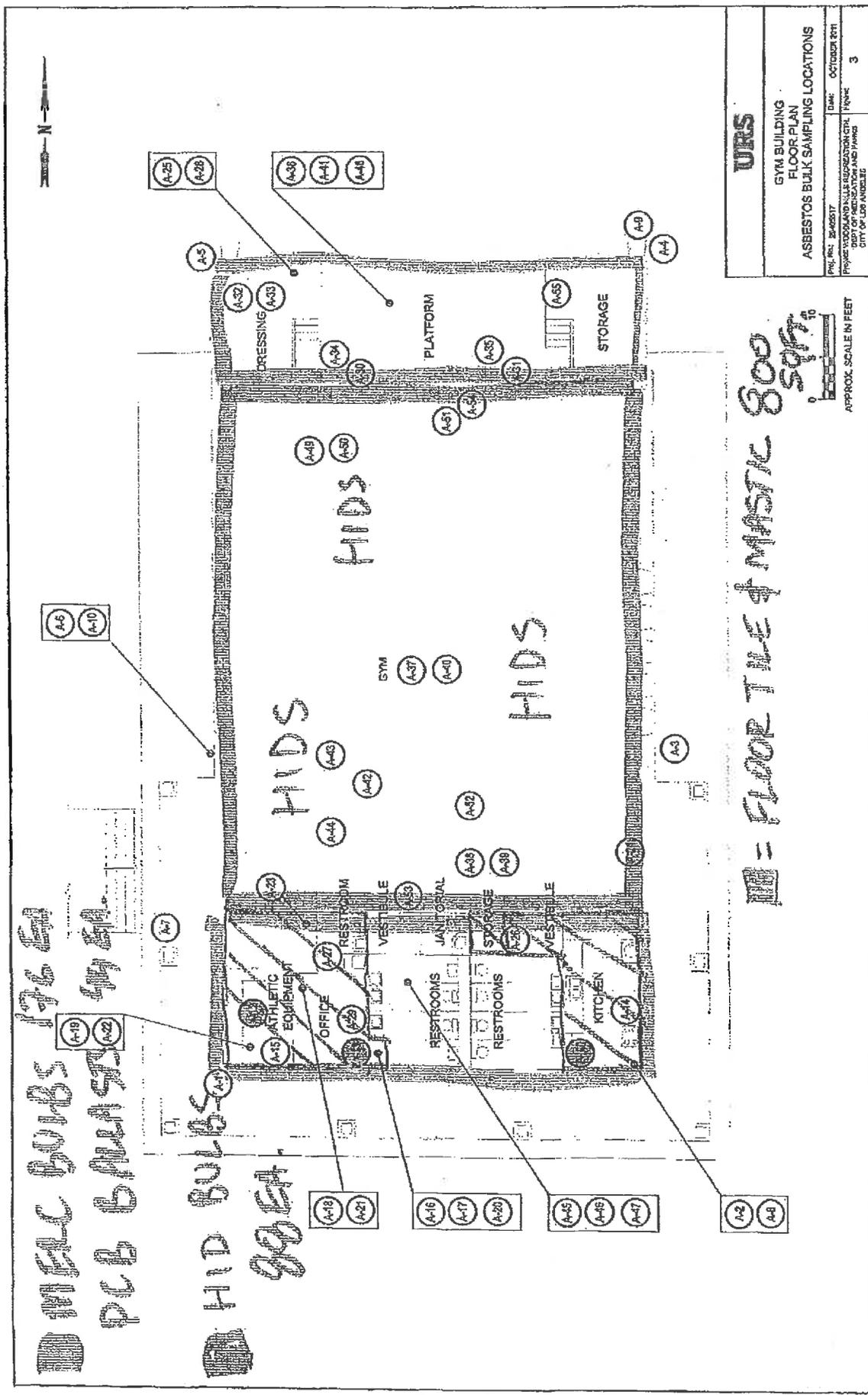
4. Change without regulatory effect amending definition of chief in subsection (b) filed 3-4-92 pursuant to section 100, title 1, California Code of Regulations (Register 92, No. 19).
5. Amendment of subsection (c)(1) filed 5-1-95; operative 5-31-95 (Register 95, No. 18).
6. Editorial correction of subsection (b) (Register 95, No. 41).
7. Change without regulatory effect deleting duplicate "Certified supervisor" definition filed 12-21-95 pursuant to section 100, title 1, California Code of Regulations (Register 95, No. 51).
8. Repealer and new section filed 5-3-96; operative 7-3-96 (Register 96, No. 18).
9. Amendment of subsections (k)(9)(B), (q)(2)-(3) and (r)(1) definition of "Asbestos-related work," and amendment of Note filed 2-5-97; operative 3-7-97 (Register 97, No. 6).
10. New subsection (h)(2)(F), amendment of subsections (k)(6), (k)(8)(F) and (k)(9)(C)-(k)(9)(D)1., new (k)(9)(D)2.-3. and amendment of subsections (k)(9)(E) and (m)(1)(A)1. filed 10-3-97; operative 10-3-97. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 97, No. 40).
11. Amendment of former subsections (h)(1)-(h)(4)(B) including subsection renumbering and relettering resulting in newly designated subsections (h)(1)-(h)(3)(D)3. filed 8-25-98; operative 11-23-98 (Register 98, No. 35).
12. Amendment of subsections (r)-(r)(2), repealer of subsection (r)(2)(A), Note 1. and Note 2. designator, amendment of former Note 2., and repealer of subsections (r)(2)(B)-(r)(2)(B)1. and (r)(2)(B)2.-(r)(5) filed 7-6-99; operative 8-5-99 (Register 99, No. 28).
13. Change without regulatory effect amending subsections (h)(3)(D)2.-3. filed 12-20-99 pursuant to section 100, title 1, California Code of Regulations (Register 99, No. 52).
14. Amendment of subsection (g)(5) filed 3-22-2004; operative 3-22-2004. Submitted to OAL for printing only. This filing is necessary to correct a discrepancy between this section and the corresponding federal regulation, 29 CFR 1926.1101, and is not subject to Articles 5 and 6 of the Administrative Procedure Act pursuant to subdivision (a)(3) of Labor Code section 142.3 (Register 2004, No. 13).
15. Amendment of subsection (f)(5)(A) and repealer of subsection (g)(6)(C) filed 7-28-2005; operative 7-28-2005. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2005, No. 30).
16. Amendment of subsections (h)(3)(A), new subsection (h)(3)(B), subsection relettering and amendment of newly designated subsections (h)(3)(C), (h)(3)(D), (h)(3)(E) and (h)(3)(E)2.-3. filed 3-6-2007; operative 3-6-2007. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2007, No. 10).
17. Amendment of subsection (k)(1), new subsections (k)(1)(A)-(B), amendment of subsections (k)(7)(B)1.-2., new subsections (k)(7)(B)3.-4., repealer and new subsections (k)(8)(B)-(C), new subsection (k)(8)(D)1. and redesignation of former subsection (k)(8)(D) as new subsection (k)(8)(D)2. filed 5-6-2013; operative 5-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 19).
18. Amendment of subsection (k)(1), new subsections (k)(1)(A)-(B), amendment of subsections (k)(7)(B)1.-2.,

new subsections (k)(7)(B)3.-4., repealer and new subsections (k)(8)(B)-(C), new subsection (k)(8)(D)1. and redesignation of former subsection (k)(8)(D) as new subsection (k)(8)(D)2. refiled 11-6-2013; operative 11-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 45).

19. Repealer of 11-6-2013 order by operation of law 5-6-2014 pursuant to Labor Code 142.3 (Register 2014, No. 19).

20. Amendment of subsection (k)(1), new subsections (k)(1)(A)-(B), amendment of subsections (k)(7)(B)1.-2., new subsections (k)(7)(B)3.-4., repealer and new subsections (k)(8)(B)-(C), new subsection (k)(8)(D)1. and redesignation of former subsection (k)(8)(D) as new subsection (k)(8)(D)2. filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

 [Go Back to Article 4 Table of Contents](#)



MFLC BULBS 176 EA
PCB BULBS 44 EA

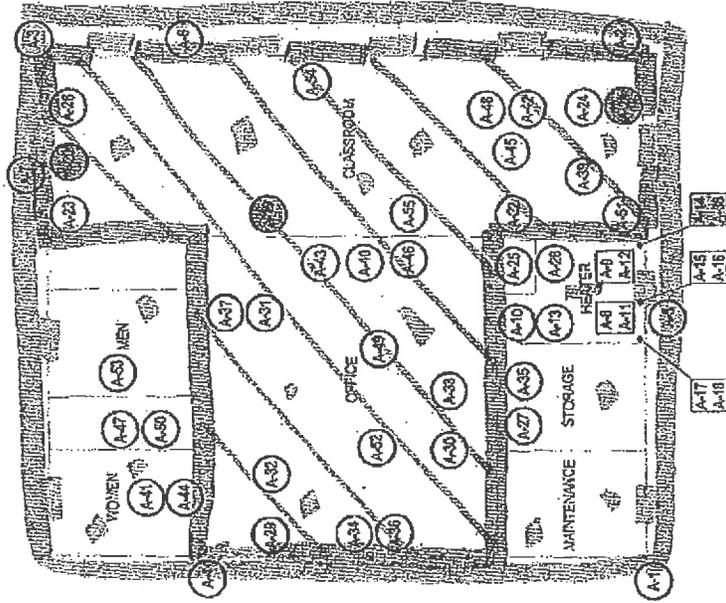
HID BULBS 90 EA

■ = FLOOR TILE & MASTIC 800 sqft

URS	
GYM BUILDING FLOOR PLAN ASBESTOS BULK SAMPLING LOCATIONS	
Proj. No.: 2000017	Date: OCTOBER 2011
Project: WOODLAND HILLS RECREATION CENTER	Phase: PRELIMINARY AND FINALS
City of Los Angeles	3



 MERC BULBS
 264 EA
 PCB BALLASTS
 66 EA.



 ROOF 15EA
 TRANSITE PANELS
 FLOOR TILE & MASTIC 1400 SQ FT
 VENTILATION

URS	
OFFICE CLASSROOM BUILDING FLOOR PLAN ASBESTOS BULK SAMPLING LOCATIONS	
Proj. No. 242037	Date OCTOBER 2011
TRUMP WOODLAND MILLS RECREATION CRT DEPT OF RECREATION AND PARKS CITY OF LOS ANGELES	Page 4

APPROX. SCALE IN FEET

EXHIBIT "D"



DEPARTMENT OF CONSUMER AFFAIRS

Contractors State License Board

Contractor's License Detail - License # 604927

⚠️ DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

- ➔ CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
- ➔ Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
- ➔ Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
- ➔ Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

License Number	604927	Extract Date	8/21/2014				
Business Information	BETH HAKES INTERIORS Business Phone Number: (818) 365-3880 17939 CHATSWORTH ST SUITE 504 GRANADA HILLS, CA 91344						
Entity	Sole Ownership						
Issue Date	10/16/1990						
Expire Date	10/31/1998						
License Status	EXPIRED This license is expired and not able to contract at this time.						
Classifications	<table border="1"> <thead> <tr> <th>CLASS</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>B</td> <td><u>GENERAL BUILDING CONTRACTOR</u></td> </tr> </tbody> </table>	CLASS	DESCRIPTION	B	<u>GENERAL BUILDING CONTRACTOR</u>		
CLASS	DESCRIPTION						
B	<u>GENERAL BUILDING CONTRACTOR</u>						
Bonding	CONTRACTOR'S BOND This license filed a Contractor's Bond with <u>STAR INSURANCE COMPANY</u> . Bond Number: SA5103772 Bond Amount: \$7,600 Effective Date: 09/21/1994 Cancellation Date: 03/11/1995 <u>Contractor's Bond History</u>						
	WORKERS' COMPENSATION This license is exempt from having workers compensation insurance; they certified						

1.05 QUALITY ASSURANCE

A. **Manufacturer Qualifications:** A qualified manufacturer that is certified for chain-of-custody certification by an FSC-accredited certification body.

B. **Installer Qualifications:** A firm or individual that has been approved by MFMA as an accredited Installer according to the MFMA Accreditation Program.

C. **Installer Qualifications:** An experienced installer who has completed wood athletic flooring installations similar in material, design, and extent to that indicated for this Project and whose work has resulted in installations with a record of successful in-service performance.

1. Installer responsibilities include installation and field finishing of wood athletic flooring components and accessories, and application of game lines and markers.

D. **Maple Flooring:** Comply with MFMA grading rules for species, grade, and cut.

1. **Certification:** Provide flooring that carries MFMA mark on each bundle or piece.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver assembly materials in unopened cartons or bundles.

B. Protect wood from exposure to moisture. Do not deliver wood components until after concrete, masonry, plaster, ceramic tile, and similar wet work is complete and dry.

C. Store wood components in a dry, warm, well-ventilated, weathertight location and in a horizontal position.

1.07 FIELD CONDITIONS

A. Conditioning period begins not less than seven days before wood athletic flooring installation, is continuous through installation, and continues not less than seven days after installation.

1. **Environmental Conditioning:** Maintain an ambient temperature between 65 and 75 deg F (18 and 24 deg C) and relative humidity planned for building occupants, but not less than 35 percent or more than 50 percent, in spaces to receive wood athletic flooring during the conditioning period.
2. **Wood Conditioning:** Move wood components into spaces where they will be installed, no later than beginning of the conditioning period.
 - a. Do not install wood athletic flooring until wood components adjust to relative humidity of, and are at same temperature as, spaces where they are to be installed.
 - b. Open sealed packages to allow wood components to acclimatize immediately on moving wood components into spaces in which they will be installed.

B. After conditioning period, maintain relative humidity and ambient temperature planned for building occupants.

C. Install wood athletic flooring after other finishing operations, including painting, have been completed.

1.08 COORDINATION

A. Coordinate layout and installation of wood athletic flooring systems with floor inserts for gymnasium equipment.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

1. **Basis-of-Design Product:** Subject to compliance with requirements, provide A. Smith and Fong Company, PlybooSport, or comparable product by one of the following:
 - a. Prior approved equal.